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A STRONGER ORGANIZATION.

EFFECT OF THE LAST ANNUAL MEETING OF THE LAKE CARRIERS—IMPORTANCE OT THE BUFFALO GRAIN CONTRACT—ROCKEFELLER INTEREST IN THE ASSOCIATION.

Since their return from Detroit, representatives of the big vessel interests in Cleveland have discussed the Buffalo grain shoveling contract from all sides, and it is generally agreed that the Lake Carriers' Association not only effected a saving of $82,000 for lake shipping by this transaction but also acted honorably in giving the contract to W. J. Connors. This clear gain of $82,000 was more than had been paid into the association in dues during four years past. The future of the association depended largely on this contract. The meeting aroused interest among leaders in strong vessel corporations, who were members in the past only to the extent of paying their dues and admitting that there was a broad field of usefulness for the organization.

Some inside facts regarding the grain contract, which have developed since the Detroit meeting, prove that the duplication of bids by the two contractors, Connors and Kennidy, was an accident. Both changed th ir bids just before the time fixed for opening them. Connors quietly announced upon reaching Detroit that he intended to make a $3 bid. His confidential hint on this score was dropped where he expected it would reach Kennidy's ears. Then just before the time of opening bids he reduced the figure to $2.95, and it is thought that Kennidy, figuring on a $3 rate from Connors, expected to be below him with the offer of $2.95 which he also made. It was generally understood previous to the meeting that on even terms Kennidy would get the contract, and the action of the association contrary to this opinion is therefore looked upon as the honorable feature of the matter. Connors himself gave up hope of getting the contract when it was announced that the bids were even, but he smiled and remarked that he had been the means anyhow of bringing about a saving of $82,000 to the shipping interests. His smile and cheerful acceptance of what he thought was defeat made friends of those who were inclined to be disinterested. This same smile has undoubtedly served him well on many occasions but it was not the only factor in his favor in this case. He failed to judge, from a business stand-point, the strength of the men composing the committee when he thought he had lost the contract because the bids were even. The committee recognized the importance of having a responsible bidder come in and cut 40 cents per thousand bushels off the cost of shoveling grain. They realized their indebtedness to him on this account. They knew that they might as well abandon all hope of treating the Buffalo grain-shoveling question in a business-like way in the future if it was to be understood that no matter how much the charges were reduced one man was to have the preference. They acknowledged indebtedness to the former contractor for what he had done in correcting grave abuses in the work, but they felt that they had favored him on two previous occasions and he was amply repaid. They found when they submitted their report, backed up by these arguments, that members of the association, with very few exceptions, were of the same opinion, and the honor of the association demanded the course that was pursued in giving the contract to Connors.

There has been talk in Buffalo of a cut in wages of grain shovelers, a return to old-time troubles with men on the docks and difficulty with the elevators on account of this change of contractors. Vessel owners who understand the situation have no fears of this kind. They were informed of the ability of the man to whom they were giving the contract, and they knew of his resources and the means that he would employ to meet the situation of reduced costs without cutting down wages. Connors announced that he would be glad to undertake a five-year contract for Buffalo grain shoveling at 50 cents a thousand for the steam shovels, and he made no secret of his intention to enforce a reduction of steam-shovel charges to meet the reduced general cost. This will prompt, it may be said, opposition from the elevators that have been making large profits from leasing the steam shovels. Some opposition of this kind may be encountered, but it is more than probable that the new contractor, notwithstanding his outspoken manner, is not without friends among the elevator managers. When the new elevator of the Great Northern company, the largest in Buffalo, was opened in September last it was necessary to plead with the management to give the grain shoveling at that elevator to Kennidy, who was then engaged by the vessel owners, as it was intended to have Connors do the work. And then, too, the fact that the new contractor had the support of the Western Transit Co. (New York Central line), as well as the Great Northern Steamship Co., at the Detroit meeting, is evidence of close relations with important elevator interests in Buffalo. There is little fear, therefore, of vessels being called upon to pay more than the price fixed at Detroit, $2.95 per thousand bushels, for grain shoveling at Buffalo next season, and if the new elevator interests enter into a scramble for business, reducing or throwing off altogether the steam-shovel charge, there is no telling how low the cost may be. In the end the vessel owner is benefited, whatever may be said to the contrary, as lower transportation charges on grain will retain for the lakes business that would otherwise go by southern routes.

From the manner in which this grain-shoveling question was handled at Detroit it is quite evident that some of the managers of the large ore-carrying fleet, who occasionally put vessels into the grain trade, will become interested in the removal of other disadvantages that exist in this trade. They have already promised to take a hand in trying to overcome the various abuses that result from the present unsatifactory grain bill of lading. The grain bill of lading question will probably be of first importance in the association before another meeting is held in Detroit, and if only one important subject of this kind is taken up and settled each year the shipping interests as a whole will be amply repaid for all the dues that are collected by the organization. These problems must be taken up by the big companies, who will very probably be more interested in the association in the future. They are the heavy contributors in dues, and whatever may be said to the contrary, they are entitled to control of the affairs of the association. There is nothing to be gained by opposition from the smaller interests. In this connection reference is made to one of the speeches at the Detroit banquet that contained, when read between the lines, a quiet fling at John D. Rockefeller. Here it is:

"The greatest good to the greatest number is the well-known motto in this country. This is why we have large corporations, trusts, labor unions, syndicates and large vessels. There is no one in this association who has done more to live up to this motto than our new president. He is a public benefactor. He has been and still is busy in deepening the channels, raising rocks, buoying the shallows and lighting the narrows, so that a man who has, by strict economy, accumulated a few millions, can build ships that will do justice to this improvement and enable the vessel owner to carry the products of the field and the farm and the mill and the mine for the lowest possible price, and the great and good public rejoice, so that the good we do will not only live after us, but will live on us."

These remarks at the banquet passed without special notice but they brought out a strong protest later on from one of the officers of the association who knew that the Bessemer Steamship Co. was represented at the banquet. "There is certainly nothing to be gained," he said "in this kind of opposition to a big concern that is so necessary to the welfare of the association. This company paid $1,600 in dues this year, and the Rockefeller interest has contributed to the association since its organization through the American Steel Barge Co. as well as the Minnesota Iron Co., in which John D. Rockefeller is a heavy stockholder."

Iron Ore Matters—Encouraging Outlook.

A definite announcement regarding the future of the Iron Ore Association may be expected about the first of next week. The governing committee has held several lengthy sessions within the past few days. It is quite certain that the Mesabi companies will not be included in the combination The heavy mining interests of the Minnesota Iron Co. on that range are in a sense secondary to its railway, in as much as the policy of the company has been one of low cost of ore and heavy production, providing a large tonnage for the railway. This situation is, of course, a disadvantage to the smaller interests of the Mesabi, which could not carry on mining operations with low prices for ore and a limited allotment. It is also a disadantage to the producing-consuming interests of the Mesabi, which could probably be brought into the association under other circumstances, as they find that every small furnace company in the country can now secure Mesabi ore at prices almost equal to their cost of production in their own properties. In the matter of prices for 1898 it is understood that the ideas of the ore companies are very conservative and it is expected that in view of the general favorable condition of the iron market (barring a little nervousness over threatened over-production of pig iron) there will be little difficulty in effecting sales as soon as affairs of the association are settled.

"We are, in fact, too conservative about prices, I think," said Mr. L. C. Hanna, president of the association, as he picked up the table of iron ore shipments during forty-three years past, which has just been published as a supplement of the Marine Review. This table shows that the output of iron ore from the Lake Superior region during the past three years aggregates 32,833,630 gross tons, which is 29 per cent. of the grand total of 120,088,178 tons produced since the first shipments were made forty-three years ago. The output of the past seven years—62,863,825 tons— is more than the combined shipments of thirty-six preceding years. These are the figures that have caused well-informed iron men, who have faith in the export trade about which everybody is now talking, to predict shipments of 20,000,000 tons of ore from the Lake Superior region in 1900. It is this heavy drain on the miners that also prompts the opinion that the problem of Bessemer ore supply outside of the Mesabi is more serious than may appear on first thought.

The readiness with which the steel rail manufacturers and other producing interests have taken to combinations is the strongest kind of an indication of the immense business that is insured in all iron and steel lines for some time to come. The demand is at hand but the rise in values has been delayed for many reasons, not least of which was the gap that had to be filled on account of a great many idle plants. The big wire industry consolidation is now said to be assured beyond doubt, and although the list of officers given out several days ago must be passed upon after the corporation is a reality, there is no doubt of the selection of Henry W. Oliver of Pittsburg for the presidency.

Messrs. E. P. Martin and E. Windsor Richards, two English iron masters who are investigating methods in the iron industry here, and looking over leading plants throughout the country, visited the Johnson works at Lorain a few days ago, and the periodical story of blast furnaces to be built at Lorain at once was again published. These gentlemen are certainly representing British interests in their investigations, and are not here without a special purpose in view, but the announcement that as a result of their visit blast furnaces are to be built at the Johnson works immediately is hardly worth denial.

Commander T. F. Jewell, U. S. N., who has been in charge of the Buffalo office of the tenth light-house district, and who will be promoted on Feb. 1 to the grade of captain, will probably be assigned to the command of the Lancaster.

The receivership of the Columbus & Hocking Coal & Iron Co. has been terminated.

Finances of the Lake Carriers' Association.

ANNUAL REPORT OF GEORGE P. McKAY, TREASURER, IN ACCOUNT WITH THE LAKE CARRIERS' ASSOCIATION, COVERING THE FISCAL YEAR ENDING JAN. 8, 1898.

RECEIPTS.

Balance on hand Jan. 9, 1897, as per former report		$ 18
Loan from Union Naional Bank, Cleveland	$1,000 00	
Rebate on loan from Union National Bank	7 00	
		1,007 00
From underwriters, for private lighting, season of 1896	550 00	
From underwriters, for private lighting, season of 1897	132 31	
		682 31
Tonnage dues, balance of 1896		246 24
Tonnage dues, 1897		18,187 51
		20,123 24

DISBURSEMENTS.

Salaries—		
C. H. Keep, secretary, balance of 1896	800 00	
C. H. Keep, secretary, on account 1897	1,000 00	
Geo. P. McKay, treasurer, balance of 1896	300 00	
Geo. P. McKay, treasurer, on account 1897	600 00	
H. D. Goulder, attorney, balance of 1896	1,400 00	
H. D. Goulder, attorney, on account 1897	200 00	
		4,300 00
Incidentals, secretary's office	55 75	
Incidentals, treasurer's office	78 09	
		133 84
Salaries of shipping masters—		
Cleveland, A. R. Rumsey, chief shipping master, balance of 1896	800 00	
Cleveland, A. R. Rumsey, on account 1897	1,000 00	
Cleveland, assistant, in full for 1897	700 00	
Buffalo, Wm. Fletcher, in full for 1897	900 00	
Ashtabula, Dan. Harrington, in full for 1897	680 00	
Toledo, Patrick Mitchell, in full for 1897	600 00	
Chicago, J. W. Hanson, in full for 1897	1,000 00	
Chicago, Robt. Anderson, assistant, in full for 1897	640 00	
South Chicago, Maynard Fisk, in full for 1897	600 00	
Milwaukee, Wm. Lennon, in full for 1897	900 00	
		7,820 00
Expense of shipping offices—		
Cleveland—		
Rent, Oct. 1, 1896, to April 1, 1897	$ 62 50	
Rent, April 1, 1897, to April 1, 1898, one year in full	125 00	
Telephone rent	72 00	
Provisions, feeding needy sailors	182 44	
Office supplies	28 04	
Improvements and repairs	31 01	
		500 99
Buffalo—		
Rent, Jan. 1 to April 1, 1897	50 00	
Rent, April 1, 1897, to Jan. 1, 1898	150 00	
Telephone rent, May 15, '97, to May 15, '98	30 00	
Office supplies	42 47	
		272 47
Ashtabula—		
Rent, April 1, 1897, to April 1, 1898, in full	100 00	
Office supplies	6 85	
		106 85
Toledo—		
Rent, April 1, 1897, to April 1, 1898, in full	100 00	
Office supplies	5 10	
		105 10
Chicago—		
Rent, Dec. 1, 1896, to April 1, 1897	140 00	
Rent, April 1, 1897, to Feb. 1, 1898	305 00	
Water rent	18 20	
Telephone rent and calls	119 03	
Office supplies	87 89	
		670 12
South Chicago—		
Rent, Dec. 1, 1896, to April 1, 1897	60 00	
Rent, April 1, 1897, to Dec. 1, 1897	120 00	
Telephone calls	6 90	
Office supplies	17 55	
		204 45
Milwaukee—		
Rent, July 1, 1896, to April 1, 1897	75 00	
Rent, April 1, 1897, to April 1, 1898, in full	100 00	
Office supplies	19 41	
		194 41
		2,054 39
To Union National Bank of Cleveland—		
Six months' interest on loan of $1,000	35 19	
Payment of 1896 note held by bank	1,000 00	
Payment of 1897 note held by bank	1,000 00	
		2,035 19
Extraordinary expenses—		
Traveling expenses of Messrs. McKay and Keep to Washington and return, account gas buoys and other aids to navigation	89 00	
Traveling expenses of Treasurer Geo. P. McKay to Washington and return, account aids to navigation before light-house board	56 00	
Traveling expenses of Treasurer Geo. P. McKay to Detroit and return, account aids to navigation	7 00	
Traveling expenses of Secretary C. H. Keep to Detroit and return, account aids to navigation	20 75	
Traveling expenses of Secretary C. H. Keep to Washington and return, account aids to navigation	33 00	
Charts for locating gas buoys, account aids to navigation	3 00	
Services of tug Home Rule in towing gas buoys to Pelee station	75 00	
		283 75
Maintaining private lights	2 910 67	
Traveling expenses of Treasurer Geo. P. McKay to Detroit and return, to make contracts for private lighting for 1897	6 75	
Traveling expenses of Secretary C. H. Keep to Detroit and return, account private lighting	24 00	
		2,941 42
Traveling expenses J. J. H. Brown, Buffalo to Cleveland and return, account grain shoveling		15 50
A. R. Rumsey, chief shipping master, account visiting different shipping offices		46 50
Traveling expenses of Capt. J. W. Millen, Detroit to Buffalo and Cleveland and return		24 75
Entertaining light-house board officials on trips to Duluth and Detroit		43 00
Flowers for funeral of Hugh McMillan		26 00
Printing and stationary for offices of secretary, treasurer and shipping offices, and printing	221 75	
wage cards	60 87	
Telegraph service		
		282 62
Money refunded to W. C. Richardson for over-assessment	16 44	
Money refunded to Bessemer Steamship Co. for dues overpaid	22 66	
		39 10
Total disbursements		20,046 06
Balance on hand		77 18
		$20,123 24

In addition to the foregoing I have to report the following unpaid liabilities:

Salaries—		
C. H. Keep, secretary, due for 1897	$1,000 00	
A. R. Rumsey, chief shipping master, due for 1897	1,000 00	
H. D. Goulder, counsel, due for 1897	800 00	
Geo. P. McKay, treasurer, due for 1897	400 00	
		3,200 00
Rents—		
Chicago shipping office, from Feb. 1 to April 1, '98	60 00	
South Chicago shipping office, from Dec. 1, 1897, to April 1, 1898	60 00	
Buffalo shipping office, from Jan. 1 to April 1, 1898	50 00	
		170 00
		$ 3,370 00

The float lights on head of Sarnia middle ground were maintained by J. J. Lynn from April 17 to July 7, 1897, and lights kept in place at Lime-Kiln crossing and Amhertsburg from March 13, 1897, to Dec. 15, 1897.

(Signed) GEO. P. McKAY, Treasurer.

In preparing to accommodate ships of the 700-foot class, like the White Star liner building at Belfast, an expenditure of $21,500,000 will be made for improving the dock system at Liverpool. The cost of improvements now progressing will be over $5,500,000, and they include the construction of a new dry dock 920 feet long, with an entrance of 94 feet. The contemplated new scheme includes the enlargement of a dry dock, now 475 feet long, to 1,000 feet long and 90 feet wide, and the construction of two additional dry docks, one 630 feet long and 80 feet wide and the other 620 feet long and also 80 feet wide, in lieu of two present small dry docks; the enlargement of a number of wet docks, so as to provide berths for any number of vessels 800 feet long and for a limited number 900 feet long, and one dock is to be made sufficiently large to accommodate a vessel 980 feet long. The entrances for these larger docks are to be made 100 feet wide. The Liverpool dock management is certainly reaching well into the future in undertaking improvements on such a large scale, as the Lucania and Campania, largest Atlantic liners now trading to that port are only 625 feet long and a little over 65 feet wide, and the new German steamer Kaiser Wilhelm der Grosse (largest ship afloat) 649 feet long and 66 feet wide.

Jacob G. Neafie, president of the Neafie & Levy Ship & Engine Building Co., died of heart failure at his home in Philadelphia on the 16th inst. The Neafie & Levy company operates a large plant on the Delaware river front in Philadelphia, having established the business in 1844 under the name of the Penn Iron Works. During the Mexican war the firm built a number of vessels for the government, and while the war of the rebellion lasted it constructed engines for 120 government ships, some of them the largest in the service. Mr. Neafie was in his eighty-third year.

Atlantic coast vessel owners have filed protests with Senator Frye against the exclusion of the steamboat inspection service, light-house service and life-saving service from the civil service rules. Similar remonstrances would be forwarded from all parts of the country if it was thought there was any danger of these branches of the government being interfered with on account of proposed changes in the civil service regulations.

Millions for New York and Philadelphia Harbor Work.

Commercial bodies of New York city, as well as the state and city officials, have entered into an organized effort to secure an appropriation of several millions of dollars from congress for deepening and widening approaches to the harbor of the metropolis. The announcement that the commerce of New York shows a decrease during the past year as against large increases at southern ports will tend to strengthen this movement, however difficult it may be to commit the present congress to large appropriations for river and harbor purposes. Philadelphia is also bidding for a big appropriation—about $6,000,000—to complete a 30-foot channel through the Delaware to the Atlantic. The war department has prepared a report favorable to this big project and the newspapers of Philadelphia are full of argument in favor of it. In New York attention is directed to the constant increase in the size of Atlantic liners and to the magnitude of improvements in European harbors and docks, especially at Liverpool. The latest proposition on the subject is contained in the annual message of Gov. Frank S. Black of New York state, who recommends the creation of a commission to examine into the commerce of New York, the cause of its decline and the means of its revival.

"If it is true," Gov. Black says, "that the commerce tributary to New York city has been checked and discouraged by a too narrow policy prevailing there with reference to terminal facilities, that policy should be corrected, no matter whether it is pursued by the city or by individuals. The facilities of New York belong, not to the city or even to the state, but to the country. If by location she is the best point of shipment to foreign markets for Western farmers, then her advantages should be open no more to a Broadway merchant than to a Kansas farmer. And the rights of the latter should not be abridged by restrictions or charges which would drive him to Galveston or New Orleans. Every citizen in this country has a right to get to the sea with his product, no matter whether he lives on the coast or not, and he should not be subjected when there to unreasonable demands from those who have accommodations which he is obliged to employ. Some communities are so placed that their course not only interests but largely affects others. To the extent in which this is true, just to that extent has the public the right to advise and direct those so situated. New York city is in this class. Her affairs are not local, but national, and this view receives constant recognition at the hands of the general government. Millions of money from the general treasury have been expended in New York with national sanction, and millions more should be expended now in the single project of deepening the approaches to her harbor. But this national aspect cannot be urged when her benefits are considered and denied when others claim theirs. This state should open such facilities in New York harbor as will draw and accommodate every pound of commerce which would naturally come there. The desire on the part of individuals or of the city for rapid accummulations should not prevent this result. The broadest and most liberal policy is the wisest. An outlay for such a purpose would be repaid tenfold in pecuniary returns and in the growth and prestige of the state. Neglect or carelessness in dealing with this subject would put New York at a disadvantage with other ports in the United States, and might put the whole country at a disadvantage with Canada. The Canadians are just now discussing this subject, and are relying upon advantages afforded by the St. Lawrence river to attract over that stream the products of Wisconsin, Minnesota, Dakota and other western states intended for foreign markets. This competition should be feared and met."

Cost of Pier Construction Work on the Lakes.

Duluth, Minn., Jan. 22.—King & Steele of this city are the lowest bidders on two jobs of harbor work—one of them very large—for which Major Clinton B. Sears, United States engineer, opened bids within the past few days. They captured the work of building the substructure for the new south pier of the ship-canal entrance at $170,779.50, and their bid on the breakwater in Agate bay harbor, also the lowest, is $15,300. Other bids on this Agate bay breakwater work, which is to be about 300 feet in length, were: Norris & Fitzgerald, Duluth, $18,150; Frederick Davis, Duluth, $16,470; Lipsett & Gregg, Sault Ste. Marie, $16,050; Porter Bros., Duluth, $15,960. There were fifteen bidders on the Duluth pier superstructure job, and the totals of the different bids were as follows:

Bidders.	Total of Bids.
Porter Bros., Duluth	$217,009.50
James L. Lipsett and Robert Gregg, Sault Ste. Marie	201,840.00
Heldmaier & Neu, Chicago	234,235.50
Adolph Green, Green Bay	207,057.00
The L. P. & J. A. Smith Co., Cleveland	186,590.00
P. McDonnell, Duluth	184,540.00
N. Frederic Hugo and Frank P. Tims, Duluth	179,972.00
Carkin, Stickney & Cram, Detroit	206,395.00
McMullen & Morris, St. Paul	184,300.00
James B. Donnelly, Buffalo	181,820.00
King & Steele, Duluth	170,779.50
Frank Campbell, Duluth	212,630.00
The Barnett & Record Co., Minneapolis	183,721.50
Norris & Fitzgerald, Duluth	206,710.00
A. F. Chapman & Co., Buffalo	340,835.00

The cost of work of this kind on the lakes is indicated by details in the bid of the successful firm, King & Steele, which is itemized as follows: For dredging trench for canal pier, and for protection pier, or piers, 72,000 cubic yards, per cubic yard, 10½c.; pine or hemlock timber in accessory works, in place, 550,000 feet, B .M., per 1,000 feet, B. M., $15.65; round piles, in place, in accessory works, 16,000 lineal feet, per lineal foot, 10c.; flattened piles, in place, in accessory works, 30,000 lineal feet, per lineal foot, 11c.; steel drift bolts and spikes, in place, in accessory works, 51,000 pounds, per pound, 1.65c.; steel machine bolts, in place, in accessory works, 15,000 pounds, per pound, 1.81c.; cast iron washers, in place, in accessory works, 5,000 pounds, per pound, 1.38c.; rock filling in canal pier cribs, and between bearing piles, in protection piers, and rip-rap, etc., in place, 30,000 tons, per ton of 2,000 pounds, 72c.; gravel filling, in place, 10,000 cubic yards, per cubic yard, 55c.; gravel excavated and deposited in a stock pile, 15,000 cubic yards, per cubic yard, 22c.; timber in accessory works, taken up and rebuilt, including old fastenings, 20,000 feet, B. M., per 1,000 feet, B. M., $6; piles taken up and redriven, 3,000 lineal feet, per lineal foot, 7c.; 1,722 lineal feet canal pier cribs, exclusive of rock and gravel, complete, a lump sum of $117,800; total, $170,779.50.

Illinois Coke for Chicago Furnaces.

From present appearances the next great development in the iron trade will be the production of coke of good quality from Illinois coal. The iron and steel manufacturers at the head of Lake Michigan enjoy a location which gives them peculiar advantages in many ways. They have cheap ores, the lake vessels unloading their cargoes in the blast furnace yards. They have a very large territory over which their product can be cheaply distributed, both by rail and water transportation. To the eastward their nearest competitors are located in Ohio, 250 to 300 miles distant. To the westward, Colorado is the nearest state in which raw materials are assembled and converted into finished products. But up to the present time the Lake Michigan producers have been obliged to draw their supplies of coke from the same district supplying the producers of western Pennsylvania, West Virginia and Ohio. Thus the advantages of their location have been to a considerable extent offset by the high cost of fuel caused by the long rail haul of at least 525 miles. They can put in the most improved appliances for handling material and can adopt the most approved methods for saving labor and economizing fuel, but in these respects they can perhaps do no better than their eastern competitors, who are also thoroughly progressive, and therefore they can gain no advantage so long as they are handicapped by dear fuel. The coke problem is consequently not only an inviting proposition because of the great element of cost which is open to attack, but that attack seems to be a pressing necessity in these days of sharp competition.

The way to solve the problem is unquestionably by means of the utilization of native coal as a blast furnace fuel. Illinois coal has been coked for years on a limited scale and in desultory fashion, but the coke thus produced has not been satisfactory either for blast furnace or foundry use. The beehive oven was not suited to it, and while coke of fair quality was sometimes turned out it was more frequently either too friable or too sulphurous for the market. The retort or by-product ovens, however, have been tested with excellent results. Illinois coal from various sections of the state deposits has been found to yield a coke of good structure and satisfactory quality, and the time is near at hand when the Illinois iron trade will draw its coke supply from local sources. While the Illinois Steel Co. has not yet formally announced its intention to erect ovens to make coke, intimations are not wanting that this is soon to be done. Meanwhile others are working in the same direction, and it will not be surprising to see more than one enterprise of this character under way in the vicinity of Chicago before the year begins to wane. The effect upon the iron trade will not be merely local. If coke of good quality, fit for blast furnace use, can be delivered at the stack for $2 per ton, as is claimed by the more sanguine, it means not only an impregnable position for the Lake Michigan iron producers in their own territory, but a wider zone for outside operations—Iron Age.

Retirements in the United States Navy for 1898.

The following retirements of officers of the United States navy, who will reach the age of sixty-two years on dates stated, will occur during the year 1898: Medical Director Benjamin H. Kidder, Jan. 23; Rear Admiral Lester A. Beardslee, Feb. 1; Rear Admiral Thomas O. Selfridge, Feb. 6; Chief Engineer Fletcher A. Wilson, Feb. 7; Pay Director Arthur J. Pritchard, Feb. 12; Chief Engineer Edward Farmer, March 1; Carpenter Herbert M. Griffiths, March 17; Chaplain Frank B. Rose, April 5; Commander Samuel Belden, April 27; Medical Director Edward S. Bogert, May 7; Pay Inspector William W. Woodhull, June 15; Medical Director Daniel McMurtrie, June 18; Naval Constructor John B. Hoover, June 23; Rear Admiral William A. Kirkland, July 3; Professor John R. Eastman, July 29; Commodore Charles S. Norton, August 10; Chief Engineer Philip Inch, August 16; Pay Inspector James E. Tolfree, August 29; Civil Engineer Anecito G. Menocal, Sept. 1; Chief Engineer Alfred Adamson, Sept. 19; Rear Admiral Montgomery Sicard, Sept. 30; Carpenter Gould Northup, Oct. 10; Chief Engineer James H. Chasmar, Oct. 11; Chief Engineer George W. Stivers, Oct. 12; Rear Admiral Edmund O. Matthews, Oct. 24; Sailmaker Truman B. White, Nov. 3; Rear Admiral Joseph N. Miller, Nov. 22; Medical Director George H. Cooke, Dec. 12; Sailmaker George T. Douglass, Dec. 20; Commodore Francis M. Bunce, Dec. 25.

New Officers Among the Engineers.

Officers elected by the Manistee branch, M. E. B. A., for 1898 are: President, Wm. R. Patterson; vice-president, H. F. Otto; treasurer, Richard Winkler; recording secretary, James Meyers; financial secretary, Frank R. Winkel; corresponding secretary, Chris. Dahl; chaplain, Henry Hall; conductor, Frank McMillan; doorkeeper, Earle Perrin; trustees, H. F. Otto, Wm. R. Patterson, Thos. Collins.

New officers of John Ericsson branch, M. E. B. A., Marine City, are as follows: Past president, Harrison Butler; president, Wm. Densmore; vice-president, Michael Britz; recording secretary, E. H. Hill; corresponding secretary, Harry Stone; financial secretary, F. Oulette; treasurer, F. B. Parker; doorkeeper, John Ward; trustees, Gus. Guy, Michael Britz and Warren Butler.

M. E. B. A. No. 5, Bay City—President, Charles S. Brown; first vice-president, John Sauer; second vice-president, Wm. E. Pierce; treasurer, Henry Bennett; secretary, Thos. Chrom; warden, John Stone; marshal, C. M. Saph; sentinel, Jas. Owen; chaplain, Wm. Bennett.

M. E. B. A. No. 27, Bay City—President, C. G. Pierce; vice-president, L. B. Simpson; recording secretary, Jos. Nold; financial secretary, J. A. Braman; corresponding secretary, N. P. Slater; treasurer, Louis Gelinas, chaplain, Jos. Dean.

Ship Yard Matters.

An actual investment of $350,000 is represented in the new ship yard and dry dock plant of the Cleveland Ship Building Co. at Lorain, which was completed Wednesday, when the steamer Fairbairn, one of the Rockefeller fleet, was docked. This investment is aside from the property of the company at Cleveland, where machine shop, foundry, etc., are still maintained. Pneumatic and electric machinery is used everywhere in the Lorain plant and the difference in cost of building a ship at this yard as compared with the old Cleveland works is certainly 10 per cent or more. Overhead cranes permit of the use of plates equal to the largest that are used anywhere in the world and in this there is not only a saving in handling charges but also in the amount of riveting required on a ship. Some bad soil was encountered in one part of the dock site several weeks ago, causing a little anxiety, but the difficulty was overcome by increasing the amount of excavation and filling, and the entire plant is now suited in every way to the building of ships at the lowest cost that is attained in any part of this country. There are nine or ten steel ships of the largest type to be docked before the opening of navigation, in addition to considerable repair work on ships that will not require docking. The progress of this work, together with the building of two steel steamers of the 6000-ton type, which are now well in frame, will keep 700 to 1,000 men employed during the next two months. Dimensions of the Lorain dock, which is the largest on the lakes, are as follows: Length on blocks, 545 feet; length over all, 560 feet; width of gate, 66 feet; width of gate on top, 102 feet; depth over sill, 17 feet.

Mr. Alex. McVittie of the Detroit Dry Dock Co. told a party of vessel men who called on him during the meeting of the lake carriers that his company is now figuring on a freight steamer that will eclipse anything as yet attempted on the lakes. The proposed vessel is to be 500 by 50 feet and is designed to carry 7,500 tons on 17 feet draft. Mr. McVittie figures that such a vessel can carry ore at a profit on a freight of 50 cents from the head of Lake Superior. The Dry Dock Engine works has secured another contract for a Howden hot draft equipment. The vessel is the steamer Rhodes and the equipment will be installed by the Cleveland Ship Building Co., which has an arrangement with the Detroit company for use of this draft. The Dry Dock Engine works is also building four boilers and two engines, which are to be shipped to Seattle for service in Alaska. Work is progressing very satisfactorily on the new Cleveland & Buffalo line side-wheel steamer and, unless there is decided change for the worse in the weather, it is expected that the steamer will be in Detroit within a month. The first two of the six boilers for this steamer are completed. Material for the New York Central steamer, to be known hereafter as No. 128 at the Wyandotte plant, has begun leaving the steel works, and is expected that a carload a day will be received at Wyandotte hereafter.

The steel steamer for which Capt. John Mitchell of Cleveland placed a contract with the Globe Iron Works Co., of Cleveland, a few days ago, will be owned by the Ætna Steamship Co., which now operates the steamer Lagonda. She will be 2 feet shorter than the Mutual line steamer Coralia, but will have 2 feet more beam. The Globe company was in a position to guarantee earlier delivery than would be promised by any of the other builders on this steamer, but competition for the contract forced the price to a very low figure. The ship will cost complete not more than $225,000, including an equipment of Ellis & Eaves artificial draft apparatus, for which the Globe company has the agency on the lakes. She is to be completed in August. Dimensions are 430 feet over all, 410 feet keel, 50 feet beam and 28 feet molded depth. She will have quadruple expansion engines, with low pressure cylinder of 63 inches diameter. Steam will be furnished by three Scotch boilers, 12 by 12 feet, fitted with Ellis & Eaves draft, and allowed 230 pounds pressure.

Mr. L. M. Bowers, general manager of the Bessemer Steamship Co. was fully acquainted with conditions attending the strike of riveters at F. W. Wheeler & Co.'s ship yard and the causes that led to the closing of the ship yard on Wednesday last. He was in West Bay City immediately following the strike and when a general advance of wages was agreed upon with the ship builders, he appeared before the workmen, addressing them on the subject of advanced wages offered by their employers and stating his position as a representative of the Bessemer Co., for whom three big freight carriers are building at the Wheeler yard.

The Craig Ship Building Co., of Toledo, has contracted with the North American Transportation Co. to build a twin-screw, sea-going tug, 105 feet long, 23 feet beam and 9 feet hold. Engines will be compound condensing, 12 and 24 by 16 inches, designed for 150 pounds steam. This tug is to be used in the North Pacific and Behring sea. She will have a speed of 12 miles an hour and water ballast will be so arranged that her draft may be altered from 7 to 3½ feet.

In addition to two wooden hulls for the new Hingston & Woods dredges, described in recent issues of the Review, the firm of Wm. Hingston & Son, Buffalo, is building two wooden tugs, one for Owens & Beck of Buffalo and the other for David Baird of Camden, N. J. This latter tug is to go to Mobile, Ala.

Capt. Alex. R. Sinclair of Duluth, who is calling on vessel owners at lower lake cities, says that very mild weather and the absence of snow during the past two or three weeks is detrimental to logging operations at the head of the lakes, and the result may be a very short cut of lumber. There were 132 millions of lumber at Duluth when navigation closed, as compared with 126 millions in the fall of 1896. Stocks at Ashland are understood to be about the same as at the close in 1896. There is considerable coarse grain coming into Duluth and Capt. Sinclair is of the opinion that there will certainly be as much, if not more, grain to move next spring than was offered in the spring of 1897.

Association of Masters and Pilots.

Washington, D. C., Jan. 22.—The annual convention of the American Association of Masters and Pilots of Steam Vessels, which began at 10 a. m. Jan. 17, adjourned today at noon. One of the lake representatives, Capt. Albert S. Fitts of Toledo, was elected to the position of grand second pilot. In the past, meetings have been held annually, this being the fifth in Washington, but by a vote of this year's session, the next convention will take place in 1900. Annually the national officers will meet to confer, but the regular delegate gathering has been made biennial. The association is in a prosperous condition, having several thousand names on the rolls, and the coming year will doubtless see that number largely added to, several new harbors being now in contemplation.

The following officers were elected to serve two years: William Van Keuren, Rondout, N. Y., grand captain; William S. Durkee, Boston, grand first pilot; Albert S. Fitts, Toledo, grand second pilot; Benjamin F. Perkins, Camden, N. J., grand captain's clerk, and Luther B. Dow, Brooklyn, grand purser; the only change being that of second pilot.

The work of the convention was confined largely to a discussion of legislative matters. Senate bill 95, introduced by Senator White of California and providing for the protecting of American seamen from harsh treatment by masters of vessels, was indorsed. Several bills have been introduced into congress, relative to the steamboat inspection service, to the widening of drawbridges at various points, to light-houses, etc. These will receive the attention of the legislative committee, and this same committee will also look after routine matters that will require attention throughout the year.

These representatives were in attendance at the annual voyage: William DeGraff, New York city; John T. Fowler, Camden, N. J.; C. H. Hasbrouck, Rondout, N. Y.; George W. Teeling, Albany; John C. Silva, Providence; M. L. Spedden, Baltimore; Thomas Wallace, San Francisco; L. A. Mehaffey, Pittsburg; Benjamin M. Merrielees, Cincinnati; Mason R. Chapman, St. Louis, Mo.; C. C. Townsend, Beaufort, S. C.; V. Beacham, Washington, D. C.; J. O. Wood, Chicago; M. B. Eusina, Savannah, Ga.; Joseph W. Davis, Port Jefferson, L. I., N. Y.; Chas. Neatham, Buffalo; Samuel W. Gould, Cleveland; Albert S. Fitts, Toledo; D. E. Stevens, Duluth; Edward Hendricks, Port Huron; H. C. McCallum, Detroit.

After the close of the convention all were photographed in a body, and each harbor represented will be provided with a copy.

Preparing for 1898 Insurance.

The general agents of Buffalo, Chicago, Milwaukee and Detroit, who were practically forced out of lake insurance last spring through the combinations formed by the McCurdy-Prime syndicate and by Johnson & Higgins, are joining forces for next season's business, and it is expected they will bring about, before the opening of navigation, a pool of their several companies that will enable them to again make a strong bid for business. One movement in this direction was the order, at a meeting in Detroit on Thursday last, to go ahead with a revision of the Inland Lloyd's Register, the work being entrusted to Capt. A. B. Drake, who is experienced in inspection matters, and who will take up headquarters in Buffalo. Vessel owners will accordingly be prompted to delay placing their insurance until the several combinations have entered into active competition for business. Representatives of the McCurdy-Prime syndicate have been in England for some time past dealing with their principals, and it is understood that members of the firm of Johnson & Higgins, who just returned from the other side, were over there since the first of November.

"The competition of the Chicago combination," said one of the agents at the lake carriers' meeting, "did not result in a loss of business to Johnson & Higgins last year. They lost one fleet that was secured by the Chicago people but they obtained a big increase in business through the old general agents. The parties that suffered were the Buffalo, Chicago and Milwaukee agents, who are now trying to bring about a pool for 1898."

Convention of the Shipmasters' Association.

Milwaukee, Wis. Jan. 27.—The report of Secretary W. A. Collier, submitted at the tenth annual convention of the Ship Masters' Association of the Great Lakes, now in session in this city, shows a membership of 516. Nine death claims of $1,000 each were paid during the year and there is still a balance of $2,427 in the endowment fund and $696.43 in the general fund, from which latter fund $1,500 was recently transferred to the endowment fund. Officers elected at this meeting are as follows: President, W. E. Rice, Port Huron; vice-presidents, Henry Leisk of Milwaukee and H. C. McCallum of Detroit; treasurer, Lyman Hunt, Buffalo; secretary, W. A. Collier, Cleveland; chaplain, Richard Neville, Cleveland; marshal, John Jenks, Chicago; warden, H. Leland, Port Huron; sentinel, John Ward, Marine City. The delegates include three grand officers and one from each branch in Milwaukee, Detroit, Toledo, Bay City, Marine City, Port Huron, Cleveland and Buffalo. The association ordered a message sent to President McKinley endorsing the application of Capt. C. E. Benham of Cleveland for the position of collector of customs for the district of Cleveland.

Heavy Fall Coal Shipments.

A statement recently made up from reports furnished by all of the coal companies of Milwaukee shows that of 845,004 tons of soft coal received at that port during the season of 1897, 316,215 tons was delivered after Nov. 1. Receipts of both anthracite and bituminous coal at Milwaukee during the season of 1897, aggregated 1,492,292 tons, divided as follows:

RECEIPTS OF COAL AT MILWAUKEE, SEASON OF 1897—TONS OF 2,000 POUNDS.

	Bituminous.	Anthracite.	Bituminous and Anthracite.
Opening of Navigation to Nov. 1	528,789	466,774	995,563
Nov. 1 to close of navigation.....	316,215	180,514	496,729
Total full season.....	845,004	647,288	1,492,292

National Convention of Marine Engineers.

Washington, D. C., Jan. 22—Of the several organizations dealing with marine matters that have been in session here during the past week, the meeting of the national organization, Marine Engineers' Beneficial Association, has probably attracted most attention. This body deals largely with legislative questions pertaining to the welfare of thousands of working engineers who are employed on steam vessels throughout the country, and its deliberations at this convention, which continued through six days ending with the 22nd inst., were, as usual, given up largely to a discussion of bills before congress, most of which were also considered at previous meetings. The discussion in annual meeting covers a great many subjects of legislation, some of them pertaining particularly to the great lakes, where the association is quite strong, but after all, the details of trying to secure legislation favorable to the interest of the members is left largely to the national president and national secretary, Messrs. Uhler of Philadelphia and Dowd of Chicago, who must follow bills in congress throughout the year, and who have been re-elected to office each year for several years past on account of what they have accomplished in this regard.

Representation at the convention in addition to the national officers was as follows: T. A. Myers, A. E. Welch, Buffalo; Fred Harmon, Cleveland; Edward Dungan, Edward Blanchard, Detroit; Edwin P. Gould, Dan H. Robertson, Chicago; J. H. Mittendorf, Wm. Sheffer, John J. Brown, Baltimore; Geo. P. Wilson, Joseph Brooks, Philadelphia; J. J. Williams, New Orleans; John Henry, Bay City, proxy; J. J. Harrison, Robert A. Gibson, P. E. Leahy, W. F. Yates, J. G. M. Sterritt, Geo. W. Rouse, W. J. Du Bois, J. G. Hermes, New York; Richard E. Tomlin, F. A. Jones, San Francisco; James A. Aznoe, Toledo; John A. Colter, Galveston; Geo. H. Brown, Port Huron; C. J. Stoddard, Boston; J. J. Harrison, Jersey City, proxy; Perry N. Knaggs, Saugatuck, proxy; Paul Denis, Green Bay; Orson Vanderhoff, Grand Haven; A. McGilliway, Duluth; James L. Sweeney, Pensacola; Paul Denis, Marinette, proxy; Edward Blanchard, Detroit, proxy; John Henry, Saginaw, James R. Nash, Washington, D. C.; Perry N. Knaggs, South Haven, J. C. Collins, Milwaukee; Paul Denis, Sturgeon Bay, proxy. The election of officers for the ensuing year was not a matter of special importance, as the old board was re-elected with the exception of Vice-President Searey, who resigned. The new officers are: National president, George Uhler, Philadelphia; national vice-president, Frank A. Jones, San Francisco; national secretary, Thomas F. Dowd, Chicago, and national treasurer, John J. A. Williams, New Orleans. In a letter tendering his resignation on account of conditions connected with his present employment which would not permit him to give attention to the duties, Vice-President Searey advocated the appointment of a resident national officer for the north Pacific coast section, with powers secondary to that of the national president, especially in matters referring to that region.

The president's report was general in character and suggested various lines of legislation desired for the benefit of members of the organization. There has been at all times a snug balance in the national treasury, and although the expenditures during the past year aggregated about $5,000, the amount on hand is considerably larger than it was at the close of 1896. The membership, as reported by Secretary Dowd, is about 13,500, an increase of 1,300 during the year. In the coming year further effort will be made to increase this membership, the president having been instructed to spend at least thirty days at ports on the great lakes during the closed season holding open meetings. It was proposed that he also spend thirty days at Sault Ste Marie, where he could meet engineers in great numbers, but this was left to his discretion. He will send out in great numbers circulars to engineers who are not members of the association, explaining its aims, objects and accomplishments, and will give special attention to the districts of St. Louis, Cincinnati and Pittsburg, which at one time held membership in the organization to the number of nearly 1,000, but which are not now represented.

At the last convention considerable attention was given to a bill providing that all steam vessels of the United States of 1,000 tons or more shall have one engineer and one helper on watch in the engine room at all times while under way, and that all vessels continuously under steam for more than ten hours shall carry two licensed engineers, but it could not be learned that anything was done regarding this measure at the present meeting. The big tow barges of the lakes, which have some machinery, are said to be operated in most cases without an engineer of any kind. This subject brought out two or three resolutions and considerable discussion, and it was finally decided that President Uhler, with the advisory board, would try to secure the passage of a law providing that tow barges having boilers and engines shall carry one licensed engineer, whose grade is to be first assistant. It was also decided that members of all branches on the lakes should present to their employers before the opening of navigation next season a petition asking for an advance of 20 per cent. in wages and that they should protest against the publication in the newspapers of a card showing the wages paid to engineers. One or two other resolutions pertaining to wages on the lakes were introduced, but adverse reports were made on them, and the disposition of the convention regarding relations with employers on the lakes was conservative but firm. At Bay City and Saginaw deputy collectors of customs are removed during the winter, and it is a hardship to owners as well as officers of vessels to be compelled to go to Port Huron to settle whatever dealings they may have with government officials regarding licenses, etc. A committee appointed to take this matter up with representatives in congress reported that Senator McMillan of Michigan had promised to do all in his power to have the Saginaw and Bay City offices kept open throughout the year.

The question of publishing an official journal was again before the engineers, but as usual it went over for another year, with the understanding that the New York delegation should deal with publishers of that city who attended the convention, but who were unsuccessful in their effort to make arrangements with the general organization.

On a plea of economy, a few of the delegates proposed reductions in salaries of certain officers and also sought to consolidate the offices of secretary and treasurer, but resolutions with this end in view were voted down, as was also one providing for biennnial instead of annual conventions.

Several resolutions aiming to give representation in the national organization to small branches that are unable to bear the expense of sending delegates to Washington were also introduced but none of them seemed to hit upon the right plan and they were all rejected. The advisory board is the same as last year—Messrs. Sterritt, Brown and Brooks.

A great many resolutions introduced at the convention were turned down immediately or met with adverse reports from committees. Among measures adopted were the following: Favoring the enactment of a law that will impose a penalty upon any person signing a fraudulent application for license as marine engineer; calling upon all signers of applications for marine licenses to make affidavit regarding their knowledge of the applicant's experience; ordering a reprint of the constitution and by-laws of the organization, after authorized changes in same have been made by the president and secretary; instructing executive officers of the association to use their influence with the United States board of supervising inspectors, so as to bring about, if possible, uniform rulings among local inspectors in the matter of issuing licenses; to give branch No. 4 of Chicago and No. 44 of Manistee new charters in place of charters destroyed by accident; authorizing the secretary to distribute good-standing buttons of the association free of charge; instructing executive officers to try to bring about the passage of a law extending the term of apprenticeship from three to five years, not excepting machinists; declaring in favor of members hiring and sailing with none but members of the associaton; to have President Uhler take up and discuss with the United States civil service commission the question of having licensed engineers placed on the eligible list for inspectors without examination; providing for a memorial to the board of supervising inspectors setting forth in detail the open and habitual violation of the steamboat inspection laws by captains and owners of steam vessels plying in Alaskan waters; urging more general enforcement of the law relating to 12-hour service on steam vessels; endorsing a bill before congress making League island navy yard a repair station; fixing $50 as the cost of a new charter to branch organizations and providing that no charter be granted on applications bearing less than fifteen names; fixing the per capita tax for 1898 at $1.15.

In accordance with another resolution adopted by the convention, the executive officers of the association will ask congress to amend section 4445 revised statutes as follows: "Before an original license is issued to any person to act as master, mate, pilot or engineer, he must personally appear before some local board or a supervising inspector for examination; but upon renewal of such license, when the distance from any local or supervising inspector is such as to put the person holding a license to great inconvenience and expense in appearing in person, he may, upon taking the oath of office before any person authorized to administer an oath, and forwarding same, together with the license to be renewed, to the local board or supervising inspector of the district in which he resides or is employed, have the same renewed by the same inspectors, if no valid reason to the contrary be known to them, and they shall attach such oath to the license stub, which is retained on file in their office; provided, however, that the applicant for renewal is at the time personally within the jurisdiction of the United States inspection laws, as defined in sections 4400 and 4447 of the revised statutes. And inspectors are directed, when licenses are completed, to draw a broad pen and red ink mark through all unused spaces in the body thereof, so as to prevent, as far as possible, illegal interpolation after issue. And inspectors will, before granting an original license to any person to act as engineer of steam vessels, require the applicant to make his written application upon the blank form authorized by the board of supervising inspectors, which application shall be filed in the records of the inspectors' office." It will be noted that the clause, "inspectors shall also require applicants for engineer's license to have the written indorsement of three licensed chief engineers" is omitted in the foregoing.

During Friday and Saturday time was spared for a call on the president and for a visit with the supervising inspectors and American Association of Masters and Pilots of Steam Vessels. Mr. Furuseth, representing the federated unions of sailors and firemen, was also admitted to the convention and spoke of bills which his organization has before congress. These measures were indorsed by the engineers.

The Supervising Inspectors.

Washington, D. C., Jan. 25.—All of the supervising inspectors, excepting Matt. O'Brien of New Orleans, were present at the annual meeting of the United States board of supervising inspectors of steam vessels, which opened here several days ago, to extend over a fortnight's time. The death of Mr. O'Brien was announced at the meeting. The conclusions of the board regarding new devices for steam vessels, changes in rules, etc., will not be given out for several days after adjournment, as it is customary to arrange all amendments in printed form before they are made public.

As was promised some time ago, the board will give consideration to the suggestions made by the Prime-McCurdy insurance syndicate of Chicago regarding the printing of laws and rules for the lakes separate from regulations relating to coast and river navigation. Attorney John Shaw of Detroit and other representatives of the Chicago underwriters, who took this matter before the secretary of the treasury a few months ago, were here to discuss with the board the claim that the laws and rules of the lakes as at present issued are very liable to be misunderstood, and should be codified and published separate from laws and rules provided for coast and rivers.

This board has nothing to do with the alteration or enforcement of rules for the navigation of St. Mary's river, and Supervising Inspector Galwey of Detroit, one of the engineer members of the board, was mistaken if he is correctly quoted in the interview regarding Sault river rules sent out from Washington. He is quoted as saying that the inspectors will probably amend the rules, when it is well known that the only amendments that will be made are those suggested at the annual meeting of the Lake Carriers' Association in Detroit last week, which will be submitted to the chief of the revenue cutter service and the secretary of the treasury through Capt. A. B. Davis of the revenue cutter Gresham, and which will undoubtedly be adopted.

Capt. Peter Nelson, formerly harbor master of Chicago, died at his home in that city on Monday last. He was seventy-six years of age.

MARINE REVIEW

DEVOTED TO LAKE MARINE AND KINDRED INTERESTS.

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The books of the United States treasury department on June 30, 1896, contained the names of 3,333 vessels, of 1,324,067.58 gross tons register in the lake trade. The number of steam vessels of 1,000 gross tons, and over that amount, on the lakes on June 30, 1896, was 383 and their aggregate gross tonnage 711,031.28; the number of vessels of this class owned in all other parts of the country on the same date was 315 and their tonnage 685,204.55, so that more than half of the best steamships in all the United States are owned on the lakes. The classification of the entire lake fleet on June 30, 1896, was as follows:

	Number.	Gross Tonnage.
Steam vessels	1,792	924,630.51
Sailing vessels and barges	1,125	354,327.60
Canal boats	416	45,109.47
Total	3,333	1,324,067.58

The gross registered tonnage of the vessels built on the lakes during the past six years, according to the reports of the United States commissioner of navigation, is as follows:

Year ending June 30, 1891	204	111,856 45
" " " 1892	169	45,968.98
" " " 1893	175	99,271.24
" " " 1894	106	41,984.61
" " " 1895	93	36,352.70
" " " 1896	117	108,782.38
Total	864	444,216.36

ST. MARY'S FALLS AND SUEZ CANAL TRAFFIC. (*From Official Reports of Canal Officers.*)

	St. Mary's Falls Canals.			Suez Canal.		
	1896*	1895*	1894	1896	1895	1894
Number of vessel passages	18,615	17,956	14,491	3,409	3,434	3,352
Tonnage, net registered	17,219,418	16,806,781	13,110,366	8,560,284	8,448,383	8,039,175
Days of navigation	232	231	234	365	365	365

*1895 and 1896 figures include traffic of Canadian canal at Sault Ste. Marie.

Referring to the launch of the Japanese cruiser Kasagi, which was carried out with Japanese ceremony on the 20th at the Cramp ship yard, Philadelphia, Charles H. Cramp says that when the fleet of which this vessel is an important factor shall be completed, an event not more than two years off at the farthest, Japan will rank as the foremost naval power in the Pacific ocean, and, generally speaking, nearly, if not quite, third in rank among the naval powers of the world. She will certainly outrank in the all around sense all but England, France and Russia, and so far as the Pacific ocean is concerned, will be far superior to all except, perhaps, England, and it is doubtful if even England could, with due regard to her requirements in her own waters or in the Mediterranean and the defense of her commerce, spare naval force enough for concentration in the Pacific to equal in that ocean the new Japanese navy. This superiority is due not so much to the mere number of the vessels Japan is building as to the fact that they are of carefully selected types, perfectly elaborated designs and wisely distributed classes; all of the most approved construction and highest attainable efficiency. Principal dimensions, qualities and armament of the Kasagi are as follows: Length on water line, 374 feet 6 inches; breadth, 48 feet 9 inches; depth, 30 feet 6 inches; draft, 17 feet 9 inches; displacement, 4,900 tons; speed, 22½ knots. Armament: Two 8-inch breech-loading rifles, ten 12-C-M (or 4.7-inch) rapid fire guns, twelve 12-pounders rapid fire guns, six 47-M-M Hotchkiss rapid fire guns.

It would seem that in company with other leading iron and steel concerns the big South Chicago works is about to present a more favorable statement to its stockholders. Referring to the annual meeting to be held Feb. 9, one of the Chicago papers says: "The Illinois Steel Co. is sold ahead to next October, and while the present prices ruling for steel products are perhaps the lowest ever known, they nevertheless admit of a fair profit, owing to the low price of the raw material. It is said the company is earning nearly $250,000 net per month, and that it has been showing this rate for some months. It has charged off nearly $100,000 a month for the last four or five months on old high-priced ore, yet has been able at the same time to earn its entire annual fixed charges, amounting to $720,000, and reduce its bills payable about $600,000. One of the company's obligations for $1,000,000 comes due the latter part of this month, but it is claimed this can be easily renewed, as the same collateral which was accepted on $1,500,000 borrowed the early part of last year ($500,000 having been paid off in July) is behind the $1,000,000 note.

A measure providing for a definite classification of naval vessels will very probably receive approval of the present congress. The plans of the secretary of the navy in this regard are contained in a bill introduced by Senator Hale. According to this bill the statutes are to be amended so that vessels of 5,000 tons displacement or more shall be classed as first rates; those of 3,000 tons or more and below 5,000 tons, as second rates; those of 1,000 tons or more and below 3,000 tons, as third rates; those of less than 1,000 tons (torpedo boats and other special vessels excepted), as fourth rates. The vessels shall be commanded, as nearly as may be, as follows: First and second rates by captains, second and third rates by commanders, fourth rates by lieutenant commanders and lieutenants, and torpedo boats and other unclassified vessels by officers of below the grade of lieutenant commander.

Additional appropriations will be required by the commission of engineers that is engaged in making surveys for the proposed deep waterway from the lakes to Atlantic tidewater. This is indicated by an interview with one of the commissioners, Alfred Noble of Chicago, who says that the work will be completed and the commission will be ready to report early in 1900, if necessary additional appropriations are forthcoming. Only about one-tenth of the survey has as yet been completed, although the surveyors have been at work since September. Mr. Noble says the commission has about 100 men, divided into three parties, at work in New York state.

A. F. Burleigh of Seattle, Wash., who was one of the receivers of the Northern Pacific Ry., and who is now interested in the Yukon Transportation Co., claims that his negotiations with the Roach ship yard at Chester, Pa., for two big steamers to be used on the Pacific fell through on account of the inability of the builders to have the ships ready in time to take advantage of the Klondyke trade. He claims that the Cramps of Philadelphia were also unable to make early delivery of the ships, and he is now in the east trying to charter steamers to connect at St. Michaels with river boats that are being constructed at Seattle for his company.

Dispatches from Washington again refer to an effort that is being made to smother the river and harbor bill in the present session, in order to help insure a treasury surplus at the close of the fiscal year, June 30, 1899. It is said that Speaker Reed and the chairmen of house and senate appropriation committees are inclined to dispense with a river and harbor bill on the claim that the sum of $17,000,000, which will be carried in the sundry civil bill for continuous contracts, will be sufficient for the present year.

Senator Platt of New York will lend assistance to the scheme of having the government lend assistance to a corporation that is being formed in New York for the construction of a big floating dry dock. He has proposed an amendment to the naval appropriation bill authorizing the secretary of the navy to contract for a period of twenty years for the docking of naval vessels in a steel floating dry dock of a specified model to be maintained in New York harbor. The government is to use the dock 100 days a year for $90,000 per year.

Within the past few months several English iron masters have visited this country to personally investigate conditions that have brought about great reductions in the cost of producing iron and steel, and all of them have spent considerable time in the Lake Superior mining country and in the mills and furnace plants of Pittsburg and the Mahoning valley. Two of the latest visitors in Cleveland are E. P. Martin, president of the Iron & Steel Institute of Great Britain, and E. Windsor Richards of the Lowmour Iron Works, Bradford, England.

As first vice-president of the Lake Carriers' Association, Henry A. Hawgood of Cleveland is in line for the presidency next year. The honor will undoubtedly be given to him if he seeks it. He has always taken great interest in affairs of the organization and has been an earnest worker on committees. But if it is found that an advantage is to be gained by having the presidency again go to some port other than Cleveland, it is more than probable that Mr. Hawgood, on account of his interest in the association, will be first to advise such a course.

Record cargoes of last season will be exceeded immediately following the opening of navigation next spring. The largest cargo of grain as yet moved on the lakes was that of the Wolvin steamer Crescent City—225,000 bushels of corn, equal to 6,300 net tons, which was taken from South Chicago to Buffalo. Already the Corrigan steel barge Australia is loaded at South Chicago with 226,000 bushels of corn, and she will probably add a jag of 10,000 or 15,000 bushels to this load before leaving for Buffalo in the spring.

When the new steamer for which the Hamburg-American company has just let a contract to the Vulcan Ship Building Co. of Stettin, Germany, is completed, the Hamburg-American fleet will consist of 124 vessels, seventy of which are ocean steamships. The aggregate tonnage of the line will be 341,000 gross. Twenty-one of the steamers have twin screws and are over 7,000 gross tons each.

Two measures proposing to turn the Erie canal over to the general government have been introduced in congress. One of them, a joint resolution (H. R. 122), was introduced by a Buffalo representative, Mr. Mahany, and provides for the purchase or lease of the canal by the United States. This resolution was referred to the committee on railways and canals.

Lieut.-Commander Daniel Delehanty, U. S. N., is now governor of New York's famous home for retired seamen, Sailors' Snug Harbor. Lieut. Delehanty attained distinction in New York while engaged by the city in duties connected with harbor affairs, and he is expected to make Sailors' Snug Harbor an ideal home for the old mariners.

M. Ernest Bazin, inventor of the roller steamer, is dead. The roller steamer which he built in France recently attracted a great deal of attention throughout the world, but naval architects were not very much impressed with the craft.

Pig iron production in the United States during 1897, according to a report just issued by the American Iron & Steel Association, aggregated 9,652,680 tons, an increase of 1,029,553 tons as compared with 1896.

There is little hope entertained in Washington now for the passage of the naval reorganization bill at the present session of congress, although it is quite generally believed that the bill will be passed at the next session.

Wm. W. Bates, ex-commissioner of navigation, has a four-column article on the shipping question in the New York Commercial America of the 17th inst. He advocates discriminating duties.

They are Well Known to the Marine Trade.

R. L. Ireland, Globe Iron Works Co., Cleveland.

Geo. H. Clowes, Randolph & Clowes, Waterbury, Conn.

James Inglis, American Blower Co., Detroit.

Turn the Erie Canal over to the Government.

The United States now controls and maintains a great free waterway system extending from Duluth and Chicago to Buffalo, and from Albany to tidewater at New York. Why should it not undertake the maintenance and improvement of the remaining link in this system, from Buffalo to Albany? The fact is that the Erie canal benefits the grain growers of the northwest much more than it benefits the people of New York. A large part of New England is as much benefited by the Erie canal as is the state of New York. The lake cities of Chicago, Milwaukee, Cleveland and many others would derive more benefit from an improved Erie canal than most of the cities of New York. Let us see what the Erie canal will cost the taxpayers of New York every year, if the additional $7,000,000 appropriation is voted. The account will stand about as follows:

Operating expenses and maintenance, say	$750,000
Interest on $9,000,000 bonds already authorized	270,000
Interest on $7,000,000 bonds additional	210,000
	$1,230,000

About a million and a quarter a year from the taxpayers of New York! But that is not all. It has been explicitly stated that in making this expenditure of $16,000,000 the work has been "pared down" as much as possible; there is other necessary work, rebuilding of structures, improved appliances for towing, handling boats in locks, etc., which are pretty sure to be found necessary in the near future, even if the $7,000,000 additional is voted. Besides this, money must be raised to pay off the principal of the bonds, if they are not to be made a perpetual burden upon the state.

Now let us compare these figures of expenditure with the transportation actually effected by the canal. Suppose we take the canal traffic to be hoped for when the 9-foot improvement is completed at 5,000,000 tons per annum, and estimate 200 miles as the average haul per ton on the canal. We then have a total of 1,000,000,000 ton-miles of transportation furnished. But the annual cost of the canal to the taxpayers of the state, we have seen above, is about $1,250,000; hence, the taxpayers of the state will have to pay about 1¼ mills per ton per mile for all the freight on the canals. The present canal freight rate averages about 3 cents per bushel from Buffalo to New York, or about 1 1-5 mills per ton mile. In other words, if the traffic on the canal when deepened to 9 feet averages 5,000,000 tons per annum, the taxpayers of the state will be paying about as much in the cost of keeping up the canal and the fixed charges upon it, as the boatmen receive for freight at the present time.

These figures certainly furnish food for thought by the taxpayers of New York. They seem to us to prove conclusively that if the Erie canal is to be worth what it has cost, and worth the valuable real estate which it occupies, if it is to compensate the public for the obstruction which it creates in roads, railways and streets, and the draft that it makes upon the water supplies of the state, it must in some way be made to carry a traffic of much greater volume than it has had at any time in its history. But it is, we take it, out of the question for the state of New York to undertake any more radical improvement in this canal than that which it has now under way. The most it can do (and, as we have said above, it is doubtful whether it will do even that), is to complete the work it has already begun. The United States, on the other hand, could and we believe, would, undertake the radical enlargement of the canal, if the state of New York were to signify its willingness to turn it over on condition that at least the present improvements should be completed.—Engineering News.

The contract for two passenger and freight steamers recently closed by the Cramps of Philadelphia with the New York & Cuba Mail Steamship Co., is among the most important announcements in the ship building line from the coast. They will be 5000-ton, twin-screw steamers of 16 knots speed, admirably adapted to the Cuban and Mexican trade. The length of the vessels will be 360 feet, beam 50 feet and depth, 32.2 feet with a draught of 20 feet. Each will have two triple expansion engines and four boilers, and a coal capacity for the continuous steaming of 5,000 miles. They will have water bottoms from stem to stern and a large number of transverse bulkheads for strength and security.

The most ancient light-house in the United States is that of Little Brewster island, in the port of Boston, erected in 1716; the most powerful, not only in America, but in all the world, is the Fire island light-house, constructed a few years ago at the entrance to New York harbor, the intensity of which is equal to 123 millions of candles.

Trade Notes.

Frank S. Manton is now agent and president of the American Ship Windlass Co. of Providence, R. I. Geo. R. Remington is secretary and treasurer of the company.

A note in one of the Newark (N. J.) papers directs attention to a dividend of 10 per cent. declared by the Foster Engineering Co. out of net earnings during 1897.

One of the neatest marine calendars published this year has been received from H. Bloomsburg & Co., Newport News, Va., manufacturers of circulating apparatus. The illustrations of twenty-four well-known steamers are shown on a pad of six leaves, similar to the date pad.

Mr. William C. Bullitt has been admitted to an interest in the firm of Castner & Curran, general agents for the Pocahontas Coal Co., and the business will hereafter be transacted under the name of Castner, Curran & Bullitt.

Wolff & Zwicker of Portland, Ore., were the lowest bidders for the construction of the coast survey steamer Klondyke, for which bids were opened at Washington, a few days ago. Their bid on government specifications was $135,000. They agree to complete the vessel in twelve months from date of contract. An alternate bid of $125,000 was submitted with provision for change of material. W. E. Woodall & Co. of Baltimore and the Union Iron Works of San Francisco both asked $185,000 for constructing the vessel, the San Francisco company agreeing to complete the work Oct. 1, 1898, and the Baltimore company fixing Feb. 1, 1899, as the date of completion. Early completion of the vessel is a matter of special importance.

At the works of the Gas Engine & Power Co., Morris Heights, New York, two steel steam yachts, each 103 feet over all, are under construction for yachtsmen whose names are reserved. Considerable interest is attached to these steamers for the reason that the only difference is in the interiors. One of the vessels has the owner's quarters aft. These are two large staterooms opening into each other, with folding doors. The other has the owner's quarters forward, also the two staterooms for guests and the main saloon. This is peculiar. The galley and the quarters for the crew are aft. No explanation is given as to why the owner should prefer to sleep and live in the bow of the ship, where the motion is apt to be rather violent in a seaway. Probably crews would not object to change places in all the pleasure fleet.

Torpedo boat No. 15 was launched on the 10th inst. at the Herreshoff yard, Bristol, R. I. No. 16 is reported as nearly ready, while No. 14, which will be larger than the others, is about half completed. Torpedo boat No. 15 is 100 feet long, and is designed for a speed of 20 knots. All of these vessels are to be fitted with complete outfits of Blake pumps.

A note from James Howden & Co., owners of patents on the Howden system of hot draft, announces that when contracts now in hand are completed, the system will have been applied to boilers throughout the world supplying steam for 1,640,700 horse-power, the total number of installations being 655, and the power of some of these installations being as high as 30,000. A pamphlet recently issued by James Howden & Co.—copies of which may be had from the Dry Dock Engine Works, Detroit—gives the names of all ships fitted with this draft.

Burr Kellogg Field, vice-president of the Berlin Iron Bridge Co., died suddenly at his home in Berlin, Conn., on the 13th inst. He was a graduate of the Sheffield Scientific School, Yale University, and his first engineering work was in connection with the laying out and building of the Northern Pacific Ry. He was also superintendent of bridges in the city of Philadelphia before accepting a position with the Berlin Iron Bridge Co. Mr. Field had no small part in building up the enviable reputation which the Berlin Iron Bridge Co., enjoys, and his death is a severe loss to his associates, who speak of him as a true friend to his fellow men and an indefatigable worker, not only for the company which he had so faithfully served, but in everything he undertook.

The Superior Charcoal Iron Co., a pool that has sold since April 1, 1897, the output of eight producers of Lake Superior charcoal iron, was dissolved last week. It is succeeded by the Superior Charcoal Iron Co. of Grand Rapids, Mich., with Wm. G. Mather of Cleveland, who was president of the Detroit company, as its president. The new company will sell the product of the Pioneer Furnace, Gladstone, Mich.; the Elk Rapids Furnace, Elk Rapids, Mich., and the Antrim Furnace, Mancelona, Mich. The five companies whose withdrawal led to the dissolution of the original organization are the Ashland Iron & Steel Co., Hinkle Furnace, Ashland, Wis.; Gaylord Iron Co., Gaylord Furnace, Detroit; Spring Lake Iron Co., Spring Lake Furnace, Fruitport, Mich.; Peninsular Iron Co., Peninsular Furnace, Detroit, and Union Iron Co., Union Furnace, Detroit.

The Smith portable telephone is coming into general use as a means of communication between bridge, engine room and other parts of steamers. Capt. J. S. McNeil of the Thos. Cranage writes of it as follows: "Having used your telephone system throughout the past season, I have come to look upon the instruments as indispensable and would dislike very much to be without them in the future. Since you added the improved switch we have found them entirely reliable at all times, and in all kinds of weather. I am in constant communication with my engineer and other officers of the boat, both from my room and on pilot house. Without hesitation I would recommend them for any and all steam vessels as a great convenience, especially while going through the rivers, in port, and anywhere in close quarters, being far ahead of the speaking tubes now in use, which I have always found unsatisfactory. Your telephones have proved to be a great deal more convenient, reliable and satisfactory. The officers of the boat join me in these statements." These instruments are manufactured by the Smith Portable Telephone Co., 54 No. Clinton street, Chicago.

New York officials of the Hamburg-American line confirm the report that the company has contracted with the Vulcan Ship Building Co., of Stettin, Germany, for a fourth sister ship of the Pennsylvania of 14,000 tons gross register and 23,500 tons displacement. It is also reported that the company has contracted for two other steamers of 10,000 tons each.

Consumption and Production of Pig Iron.

Production of pig iron throughout the country continues at an enormous rate but consumption has been keeping up with it very well. On Jan. 1 the weekly capacity of furnaces in blast—188 of them— was 226.608 tons. It is more than probable that the 1,000,000 ton mark in monthly production will be reached during January. How rapidly production has been expanding, under the stimulus of a growing demand, is shown by the following estimate in the Iron Age of the output monthly during the second half of 1897: July, 710,000 gross tons; August, 796,000; September, 843,000; October, 925,000; November, 960,000, December, 997,000; total 5,221,000.

During this same period, from July 1 to Jan. 1, stocks at the furnaces, excluding those belonging to steel plants, have fallen about 275,000 tons. It may be argued that the present tremendous rate of production, close to 12,000,000 tons per annum, is an element of extreme danger. The modest increase in stocks in December, say 10,000 tons of anthracite and coke iron, proves that the consumption must be enormous, since December usually brings some slackening in the rate of melting iron. We may even witness further drift in that direction and yet not have cause for alarm. On the contrary, with the approach of spring we may be forced to face a very different state of affairs, and that is, a scarcity of pig iron in spite of a phenomenal output. As a matter of fact, the furnace capacity now available at present price limits is small. There are not a dozen stacks in the central west which are in condition to produce economically.

There are being carried by common consent as a producing asset a very large number of cripples, whom only the craziest boom can galvanize into life. So long as a stack is still standing and its machinery is in place it is carried along in the lists. Many furnaces which might be rated as fairly modern would need many months to get into shape, while others would find it difficult to secure fuel or supplies of ore for a long time. The possibility of a shortage of furnace capacity during the current year is by no means a visionary dream. It is a contingency which the trade must keep in view.

Fuel Consumption of River Steamers.

Editor Marine Review:—The illustration of the Mississippi river steamer St. Louis, in a recent issue of the Review, belching out clouds of smoke containing good fuel, brings to mind the crying need of more economical power for river steamers. On each of these large river steamers there are five or six boilers that are forced in order to furnish steam for the most wasteful engine ever invented. Their powerful exhausts, which can be heard for a mile, put one in mind of a person afflicted with consumption—fuel consumption. The City of St. Louis and steamers of her class require on the round trip from St. Louis to New Orleans, from $2,000 to $2,500 worth of fuel. Lake vessels of the same tonnage on the round trip from Buffalo to Duluth burn only $275 worth of fuel, the distance being one-third more.

This is simply because lake builders have emerged from the old beaten path and employ modern engines. When such engines are recommended and urged upon our steamboat men, they say, "Oh! you are crazy." But there is method in this kind of madness. Here is an opening for your engine builders to place on these river steamers the kind of engine that reduces the consumption of fuel, increases the carrying capacity of the vessel and brings the expenditure for round trip from St. Louis to New Orleans to a minimum. This would lower the rates and increase the traffic, and make times brisk in the sunny south. In the early history of the compound condensing engines they were introduced on the lower Mississippi before they came into use on the great lakes. They were discarded because it was thought that any fuel-saving machinery would decrease the consumption of cord wood and lower the price on it. As the cord wood was produced by slave labor it meant a greater loss to slave owners than could be made up by the saving in fuel.

Stillwater, Minn., Jan. 3, 1898. D. M. SWAIN.

Stocks of Grain at Lake Ports.

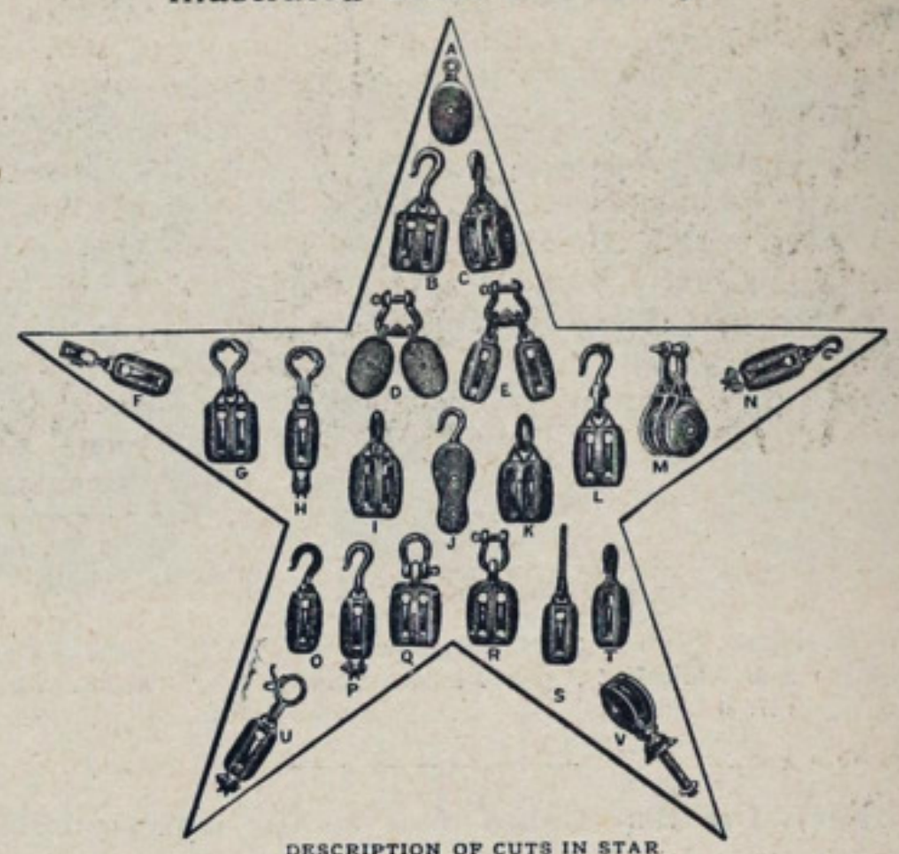
The following table, prepared from reports of the Chicago board of trade, shows the stocks of wheat and corn in store in regular elevators at the principal points of accumulation on the lakes, Jan. 22, 1898:

	Wheat, bushels.	Corn, bushels.
Chicago	9,979,000	15,464,000
Duluth	2,144,000	1,898,000
Milwaukee	132,000	123,000
Detroit	107,000	64,000
Toledo	246,000	760,000
Buffalo	1,342,000	2,860,000
	13,950,000	21,169,000

As compared with a week ago, the above figures show, at the several points named, a decrease of 932,000 bushels of wheat and an increase of 32,000 bushels of corn. On the same date there was afloat at Chicago 1,229,000 bushels of wheat, 5,583,000 bushels of corn, 132,000 bushels of oats, 89,000 bushels of rye and 93,000 bushels of barley; at Buffalo 559,000 bushels of wheat and 84,000 bushels of rye; and at Milwaukee 285,000 bushels of corn.

Manager Hammond of the Lake Erie Boiler Works, Buffalo, reports business rather quiet, though he has considerable work under contract. Two 65-ton boilers for the cities of Boston and Cambridge have just been finished. They are of the Bellaire pattern and are 8 by 34 feet. Two steel boilers are under way for the tug Gee and the new tug of Maytham's line. A steel boiler is also building for the yacht Talisman in New York harbor. In the engineering works the 30,000,000-gallon pumps building for Buffalo and Chicago are so far under way that shipment will begin about April 1. A new boiler for the Buffalo fire boat George R. Potter was completed at these works in eight days. It was stipulated that the boiler was to be completed in twenty days, and a penalty of $75 for every day over that time was to be imposed. It was also provided that the contractors should receive a bonus of $75 a day in the event of the work being finished ahead of time. The bonus thus earned amounts to $900.

Illustrated Block Dictionary.



DESCRIPTION OF CUTS IN STAR

A. Solid Eye.
B. Loose Hook.
C. Loose Front Hook.
D. Jib Sheet Blocks to Side.
E. Jib Sheet Blocks Fore and Aft.
F. Span and Bridle Block Attachment.
G. Side Sister Hook, Double Block.
H. Side Sister Hook, Single Block.
I. Regular Shackle.
J. Fiddle Block.
K. Ring
L. Loose Swivel Hook.
M. Upset Shackle.
N. Pigtail Hook for Jib
O. Stiff Swivel Hook.
P. Loose Side Hook.
Q. Reverse Shackle.
R. Reverse Upset Shackle.
S. Deck Leader.
T. Stiff Front Hook.
U. Coleman Hook.
V. New Style Deck Leader.

The illustration above gives the names of all different forms of hooks, etc., for blocks. It was furnished by the Boston & Lockport Block Co., Boston, Mass., established in 1810. A catalogue issued in 1820 by this firm shows the price of blocks to have been twice as much as at present. They have made recently a new pattern block especially for wire rope purposes. Among the specialties they have introduced are star metaline and the five-roller bushing.

Around the Lakes.

F. W. Wheeler & Co. of West Bay City will build new fore-and-aft compound engines for the tug Traveler of the Smith-Boutell fleet, Bay City. Two new boilers for the same vessel will be built by Wickes Bros. of Saginaw.

A contract has been let by officials of the Mineral Range Railroad (South Shore system) for a new coal dock at Hancock, Mich., which will be 1,000 feet long and equipped with four hoisting machines capable of unloading about 800 tons of coal in ten hours.

At the annual meeting of the Lakewood, Lake Erie and Lakeland transportation companies and Becker Barge Co., held in Cleveland, Jan. 12, directors and officers of 1897 were re-elected—President Wm. H. Becker, Vice-President Mrs. Wm. S. Mack, Secretary-Treasurer Wm. H. Mack.

A dispatch from Spring Lake, Mich., says that the last known timbers of the old sloop Porcupine, which for over a quarter of a century found their resting place on the shores of Spring lake, have been taken out for their historic value. The Porcupine was one of Oliver H. Perry's fleet in the battle of Lake Erie.

New officers of Bay City harbor No. 45, Association of Masters and Pilots of Steam Vessels, are as follows: Captain, Joseph Sauer; first pilot, Alfred Forrest; second pilot, Henry Bennett; captain's clerk, W. H. Tharp; chaplain, Chas. Brown; starboard quartermaster, James Owen; port quartermaster, Walter Hazen; saloon-deck watchman, Fremont Chute.

Two fore-and-aft compound engines, 10 and 20 inches diameter by 12 inches stroke, built by Clough, Witt & Co. of Cleveland from specifications drawn by Walter Miller, have been shipped to the Cleveland-Alaskan Gold Mining & Milling Co. at Ballard, Wash. This is a company of Cleveland people made up by Murphy & Miller, ship builders, who are now at Ballard constructing a vessel for service on the Yukon.

A Chicago telegram announcing the sale of the whaleback passenger steamer Christopher Columbus to the Goodrich Transportation Co. of Chicago created no surprise. It has been known for some time past that officials of the Goodrich company were negotiating for the purchase of the whaleback. With the Virginia and Columbus competing for excursion patronage between Chicago and Milwaukee there was no money in the business for either vessel.

S. F. Hodge & Co. of Detroit will build engines and boilers for the lumber steamer to be constructed by Alex. Anderson of Marine City for the Price Lumber Co. of Fremont, O. Engines will be of the fore-and-aft compound type, 16 and 32 by 26 inches stroke. The boilers will be of marine type, 8½ by 13 feet, and constructed to withstand a steam pressure of 130 pounds to the square inch. This vessel, which is built to carry 425,000 feet of lumber on 8½ feet draft, will have a ballast tank formed by a bulkhead placed athwartships 16 feet abaft of the stem. This is necessitated by the trade for which the boat is built, as she will be used to transport lumber from upper Michigan ports to Fremont, 36 miles south of Sandusky. After discharging her lumber cargo the water compartment forward will be filled. This will lighten her up aft and enable her to work her way down the river from Fremont to Sandusky and the open lake.

$350.00 WILL BUY Two Propeller Engines 12x14, with Slide Valves, Cranks, and all connections complete; three Propeller Wheels, 65 inches in diameter: 60 feet of 4-inch Shafting with Couplings and Cranks. E. W. DURANT, Stillwater, Minnesota. Feb. 15.

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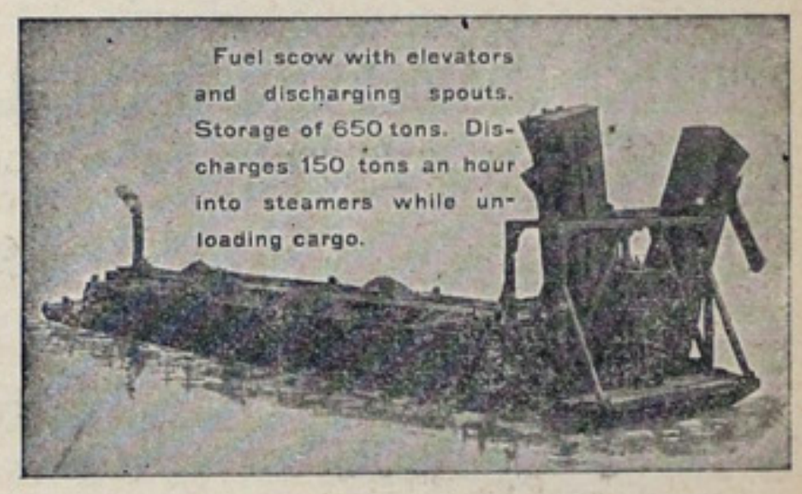
Engineers can be waited on promptly day or night.

Steamboat Fuel at Ashtabula.

Large Supplies of Best Quality.

Lighter

Carrying Different Grades at all Times.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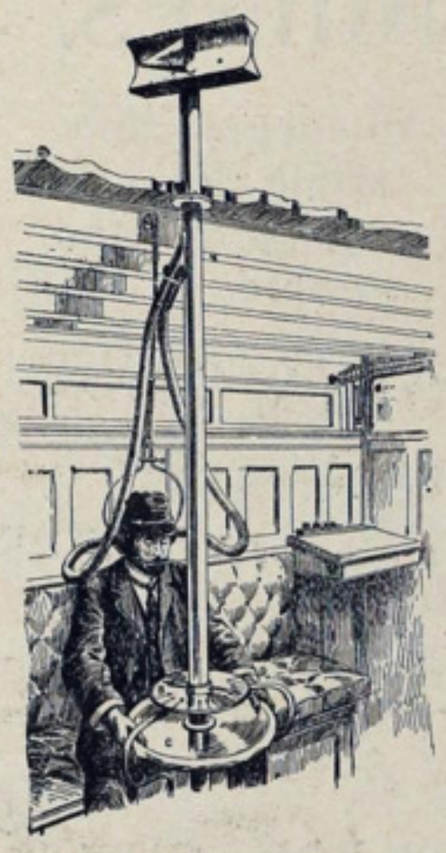

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THE EOPHONE,

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It accurately locates the place from whence the sound comes, and shows its bearing on a dumb compass. It has been adopted by U. S. Revenue Cutter and Light House service, has favorable reports of board of officers of U. S. Navy and is in practical service on many coast steamers.

This instrument will prove especially valuable in lake navigation on account of the frequency of fogs and thick weather.

ELLIS & EAVES DRAFT

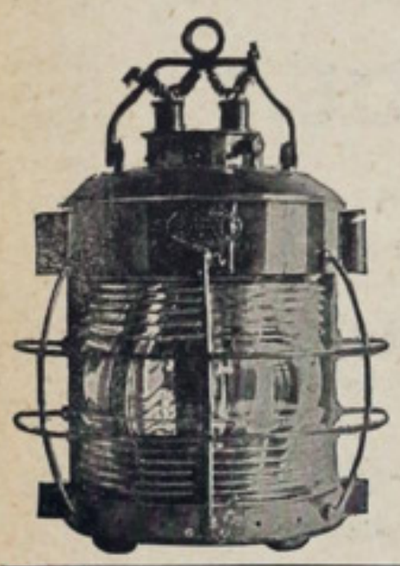
THE GLOBE IRON WORKS COMPANY, CLEVELAND, O.

SOLE MANUFACTURERS AND AGENTS FOR THE GREAT LAKES

THE PRICE PAID FOR CARRYING ORE during the past few months of this season was so near the COST OF CARRYING IT, that in order to keep even, every economy that was thought of was practiced. One means of economy was neglected in nearly every case. That was the possibility of reducing fuel consumption. This can be done by equipping your steamer with the Ellis & Eaves induced draft and Serve's ribbed tubes.

THE GLOBE IRON WORKS COMPANY, Cleveland, O., manufacturers for the Great Lakes.

MARINE LAMPS



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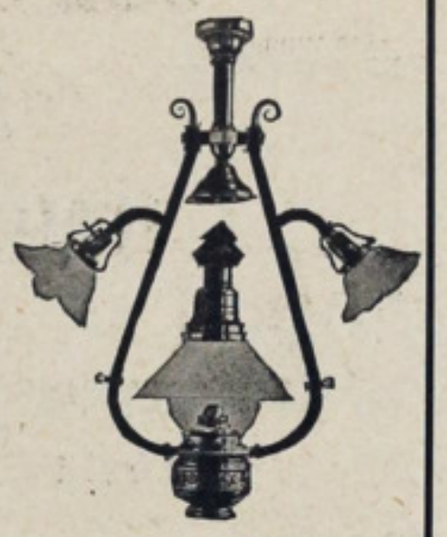

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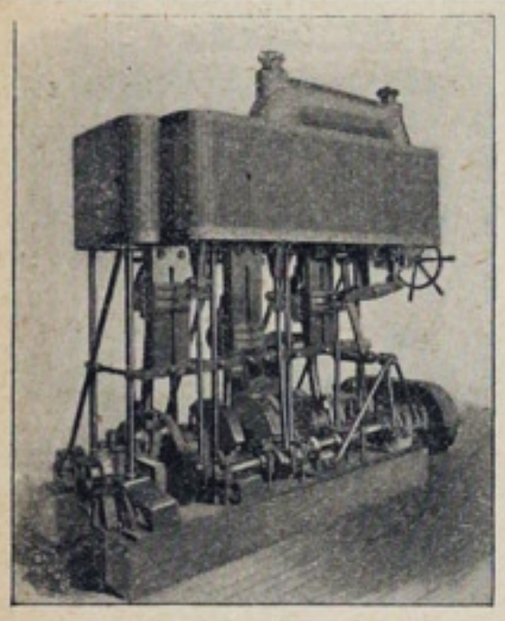

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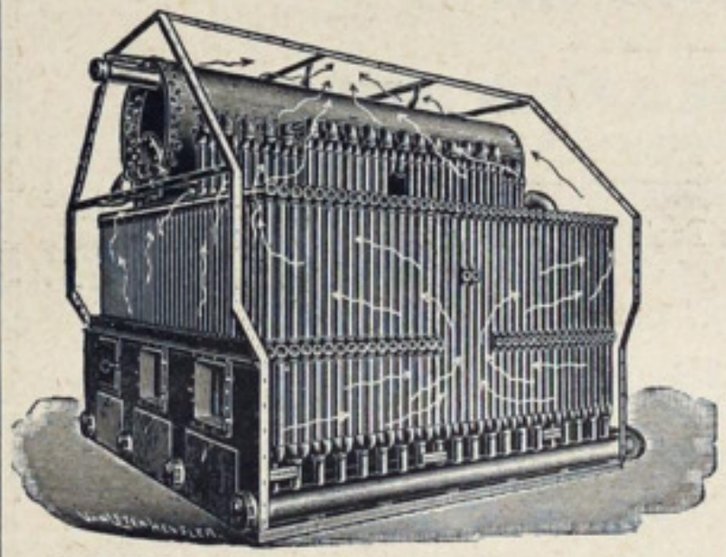

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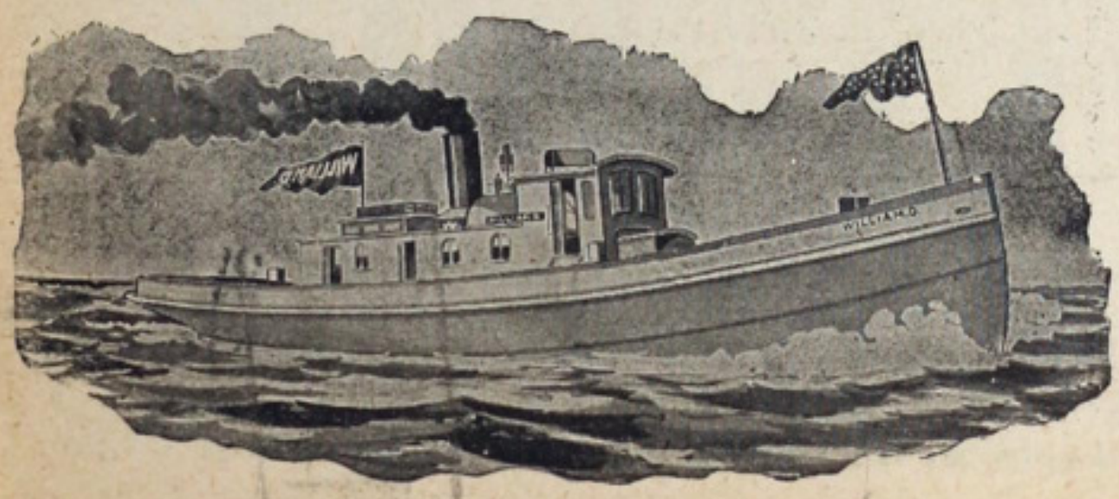

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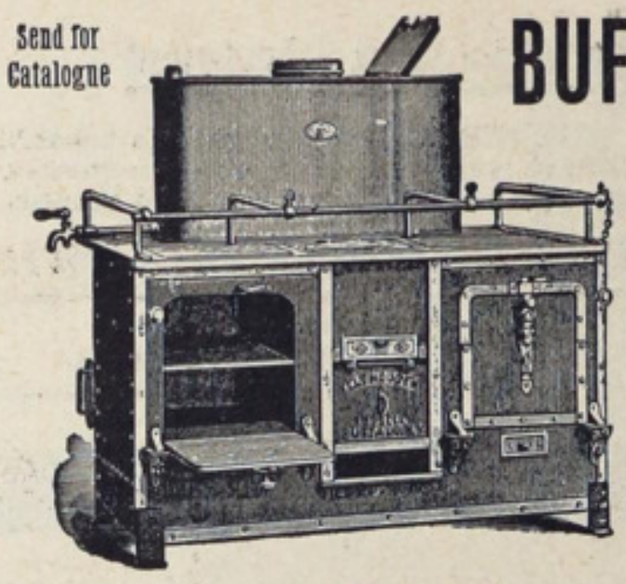

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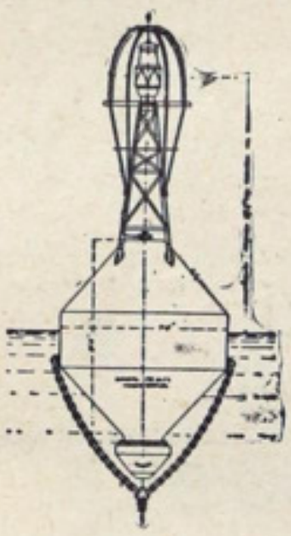

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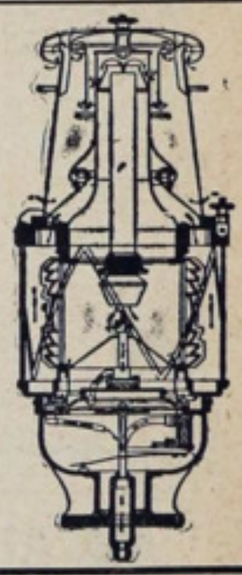

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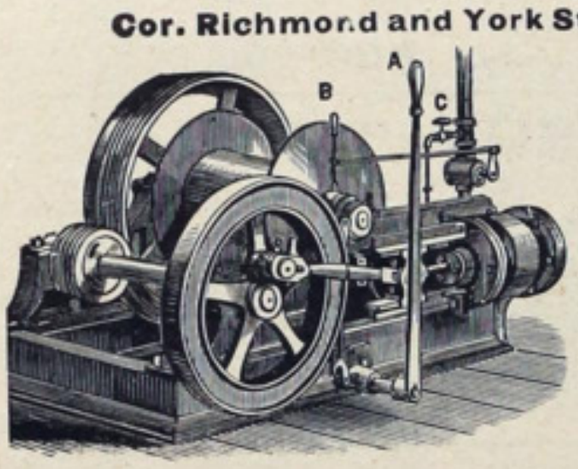

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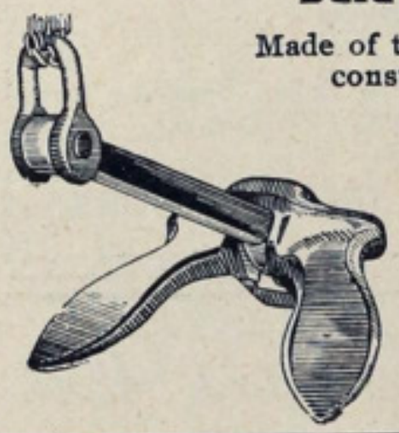

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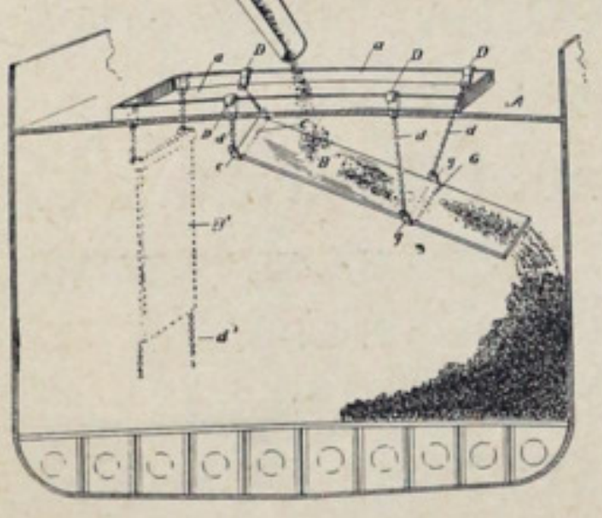

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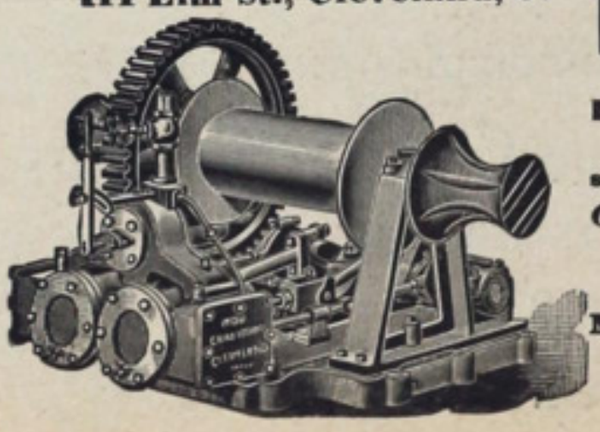

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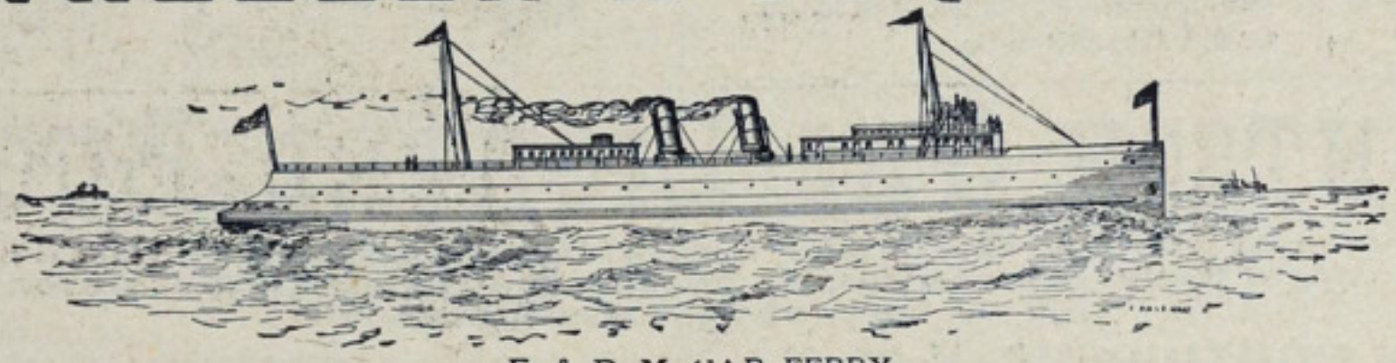

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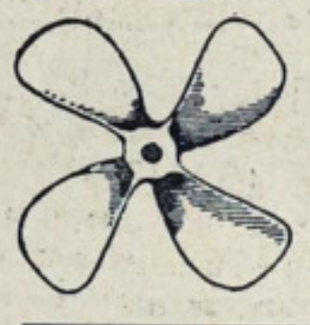

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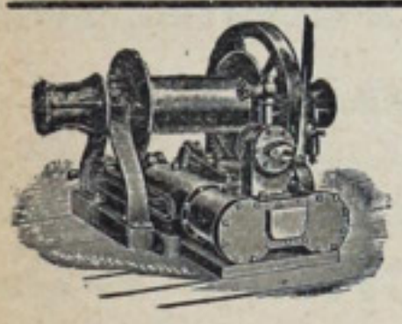

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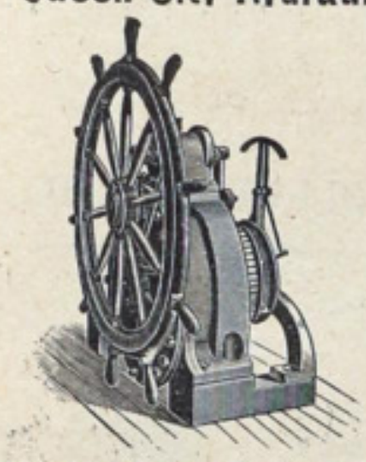

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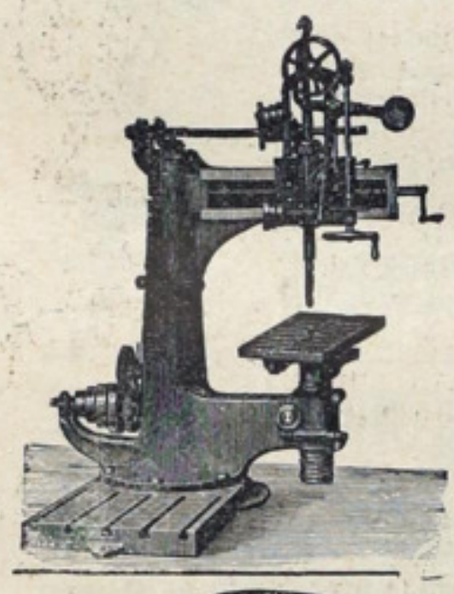

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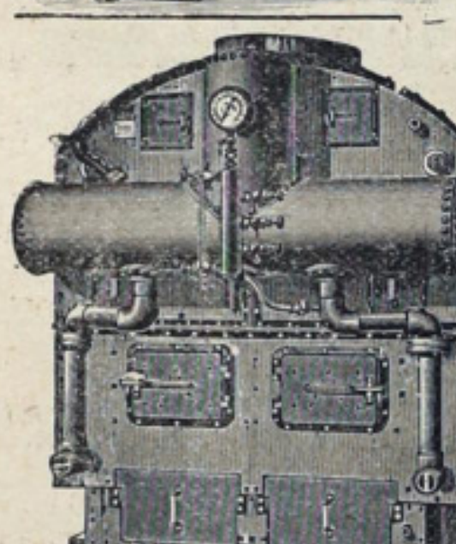

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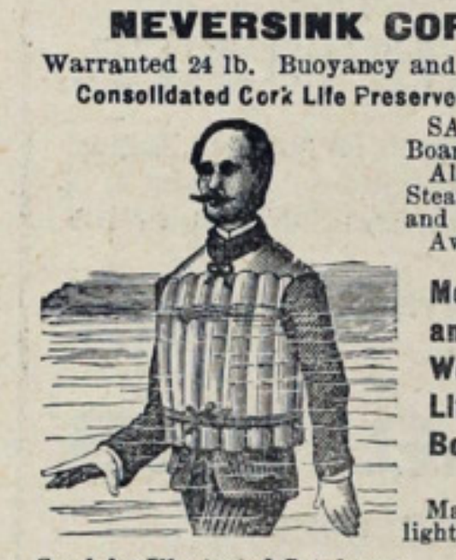

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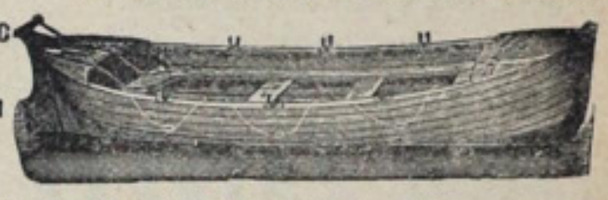

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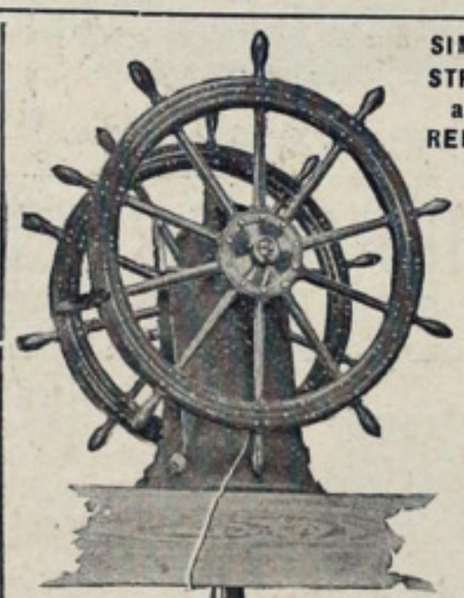

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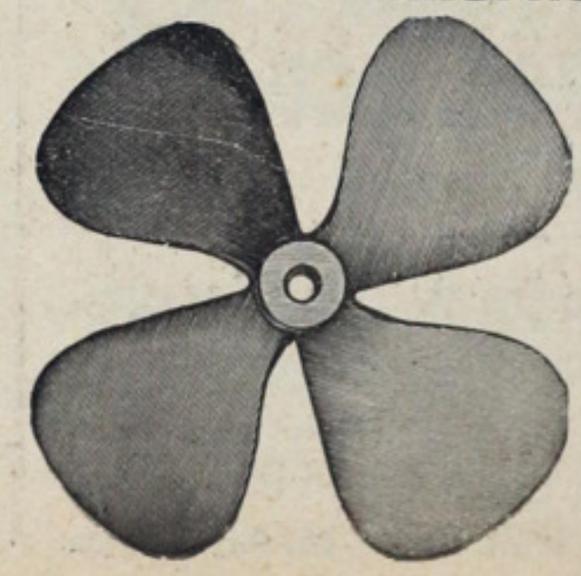

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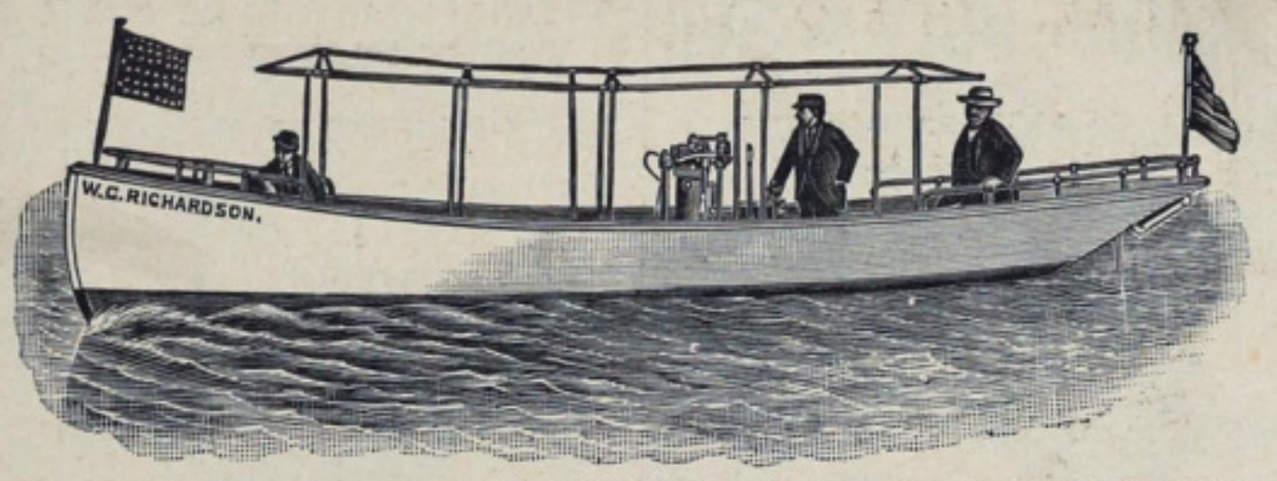

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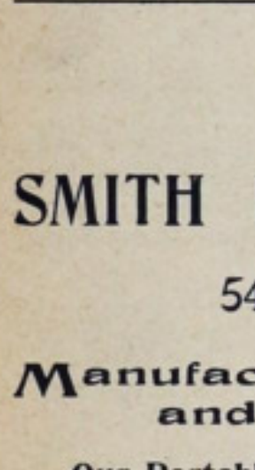

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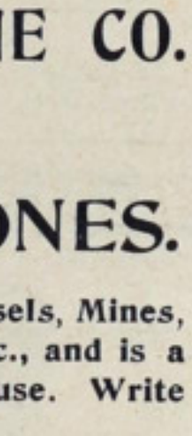

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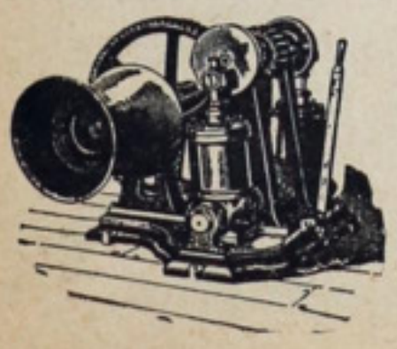

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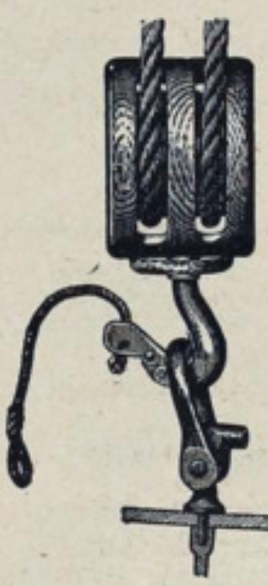

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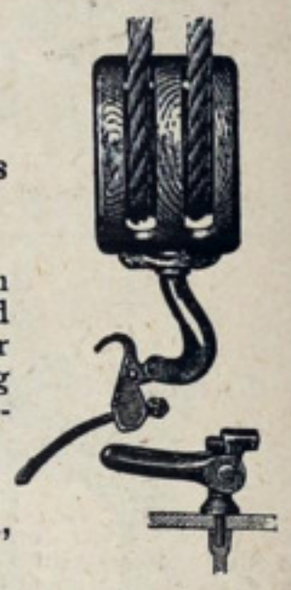

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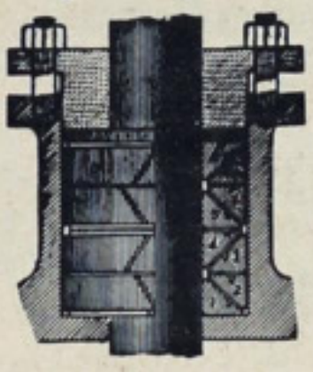

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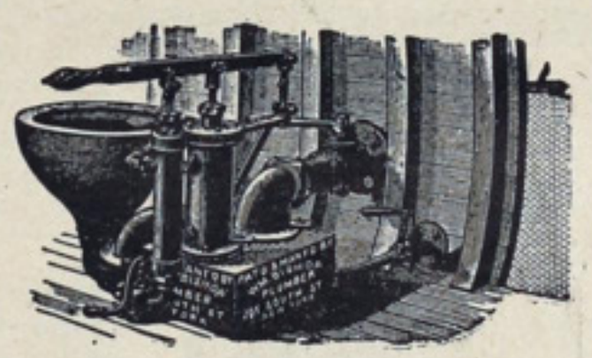

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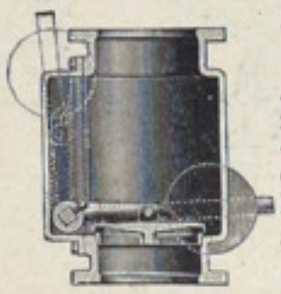

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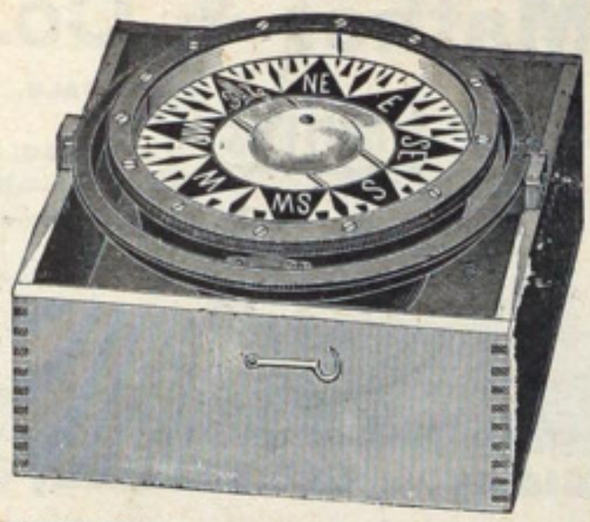

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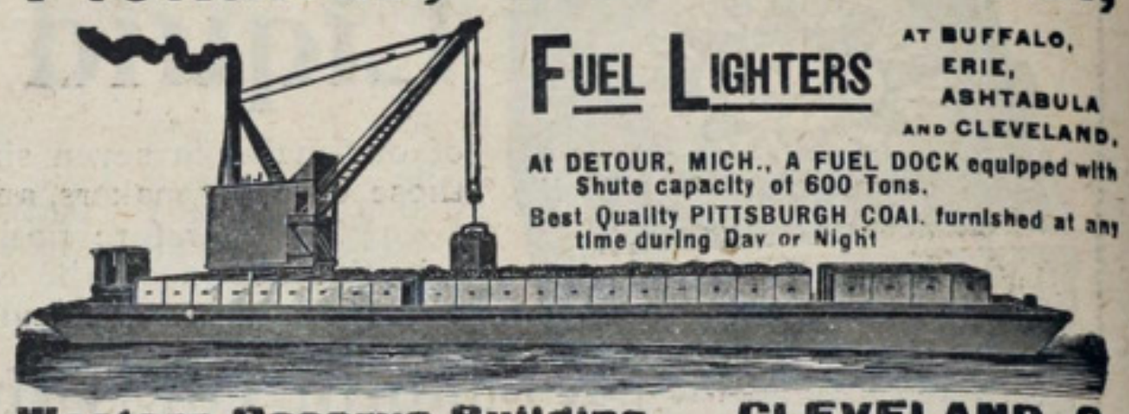

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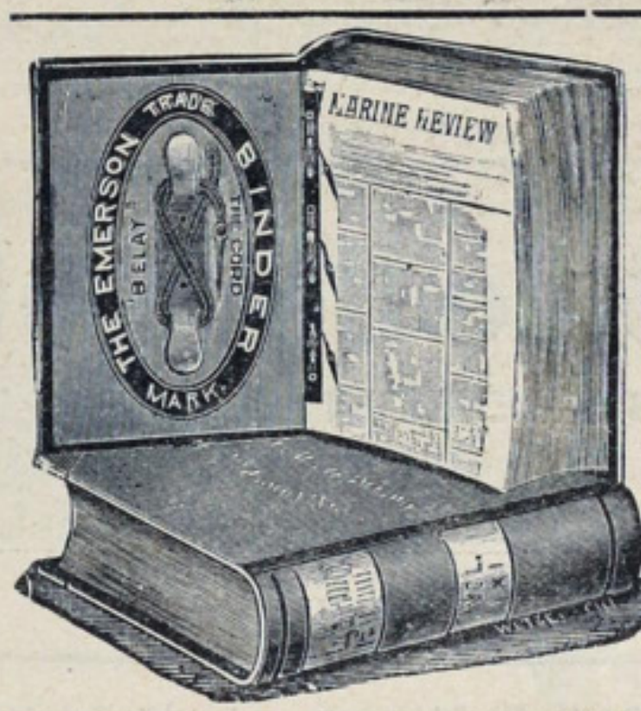

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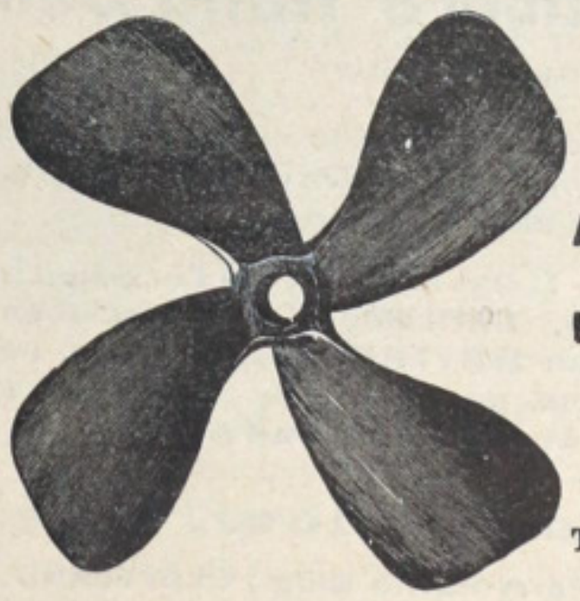

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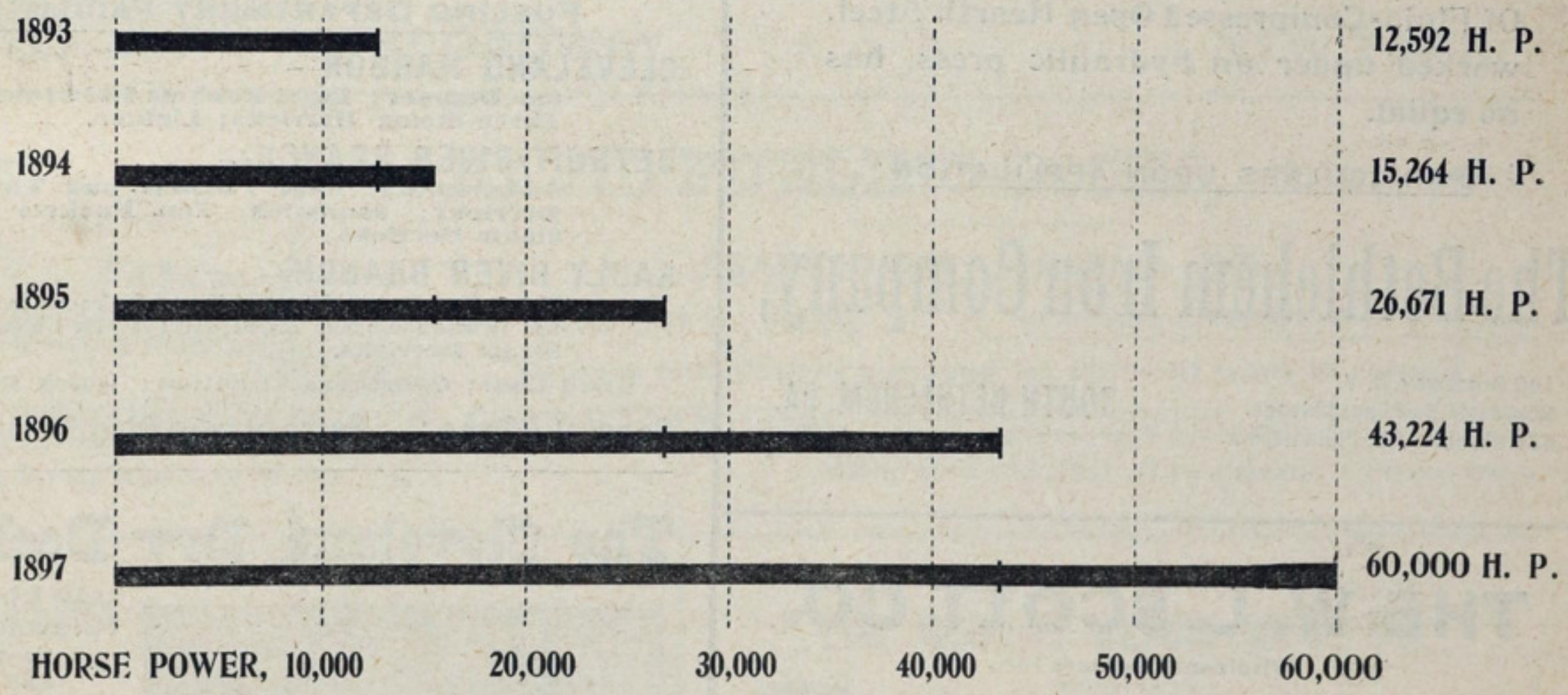

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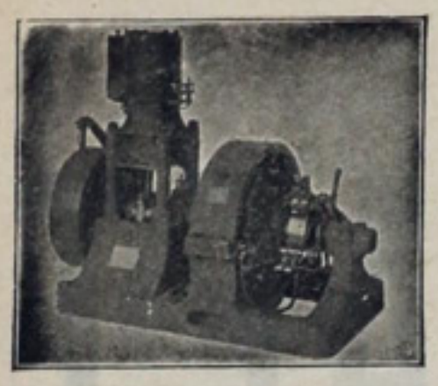

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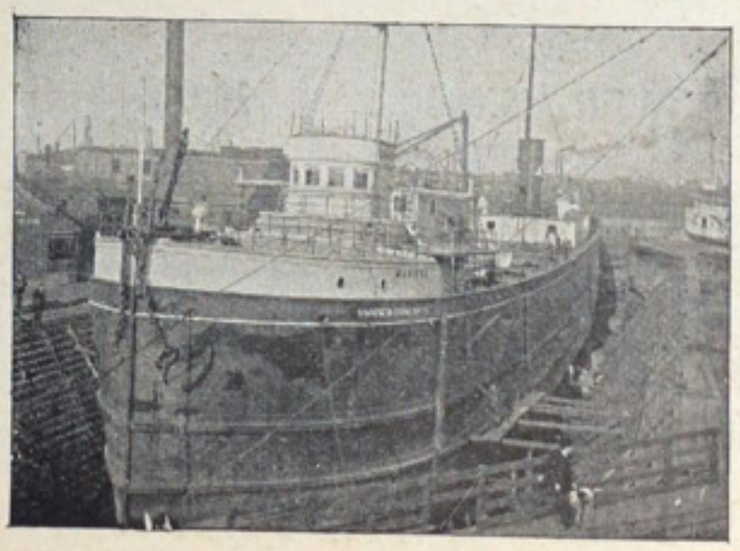

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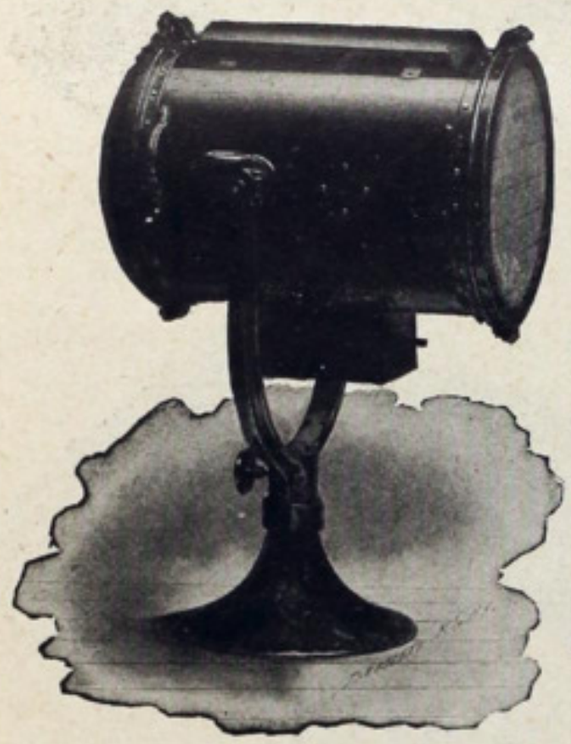

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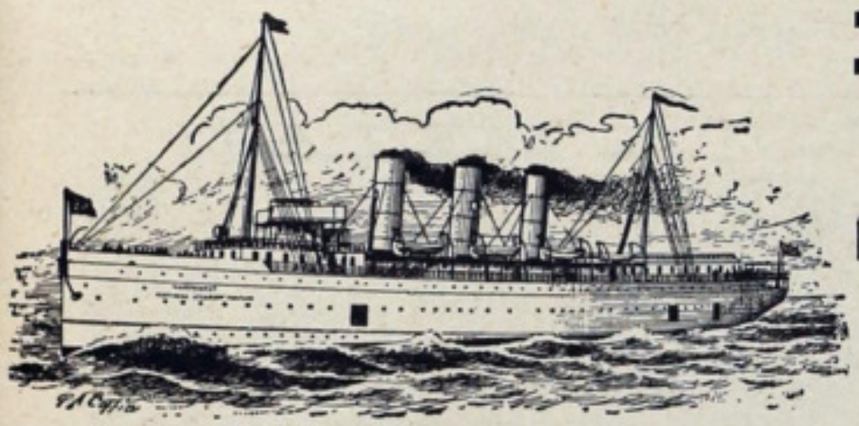

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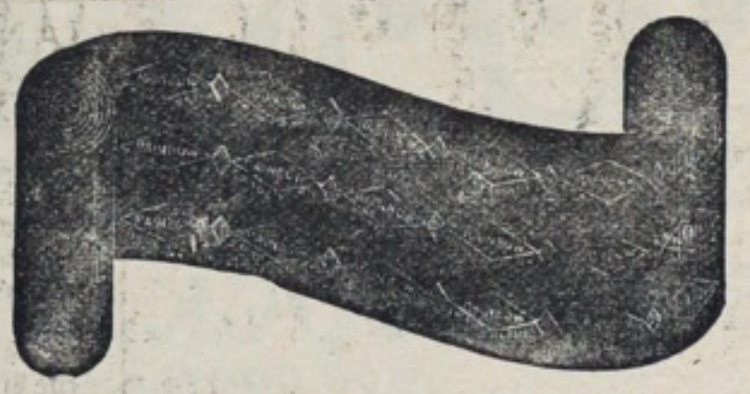

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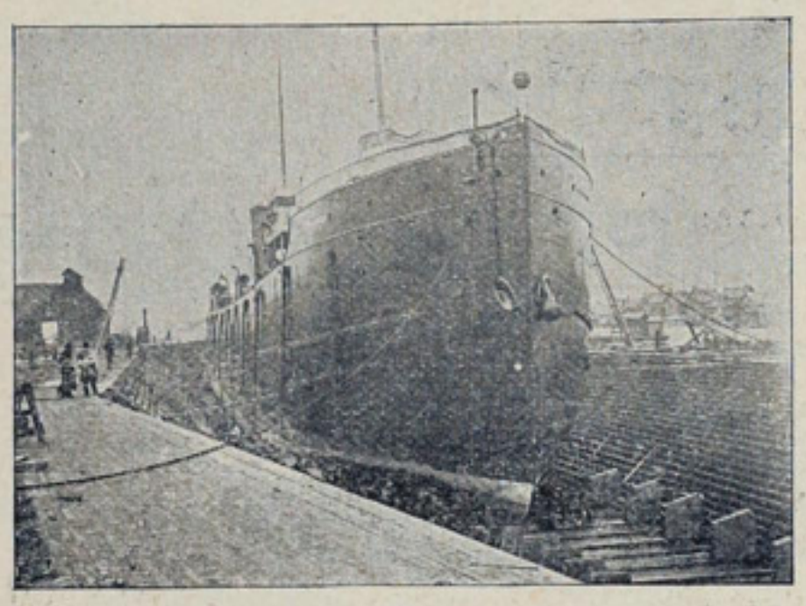

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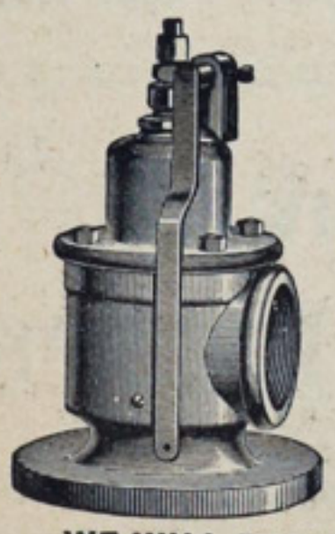

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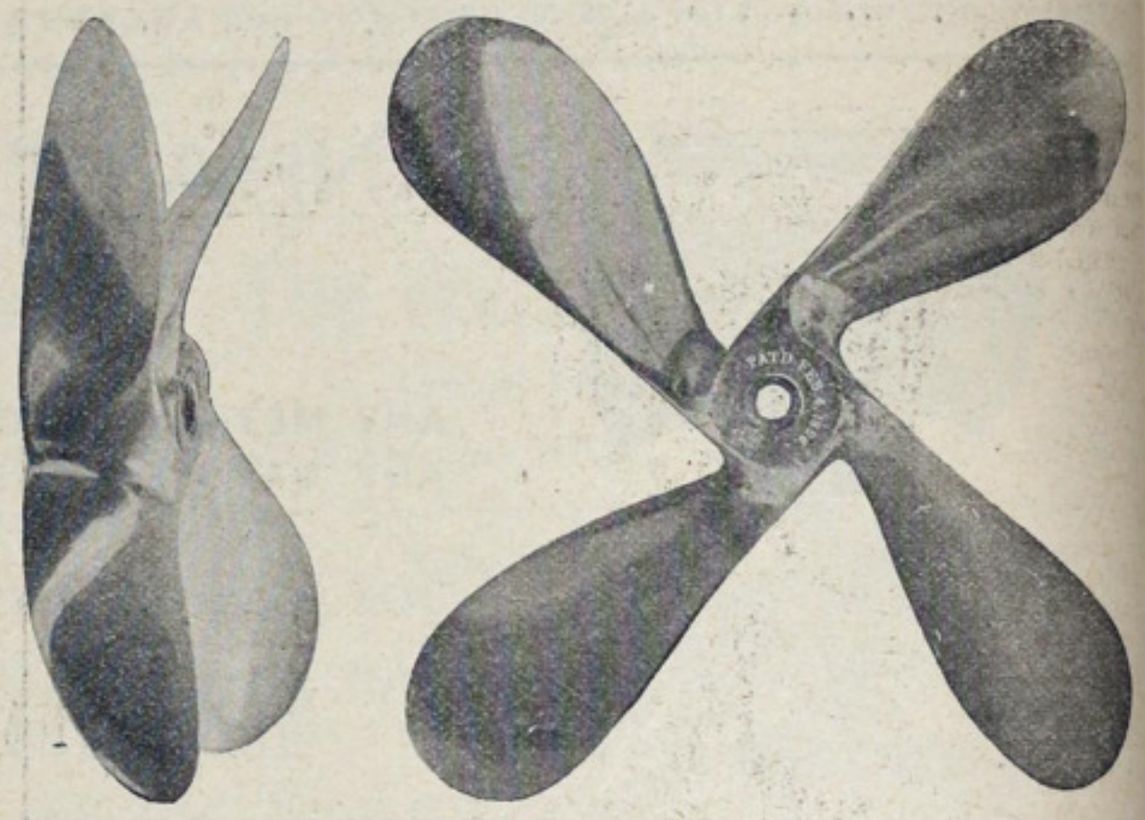

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